



REPORT

2020 Semi-Annual Groundwater Monitoring and Corrective Action Report

*Georgia Power Company - Plant Branch
Ash Pond BCD*

Submitted to:



Georgia Power Company

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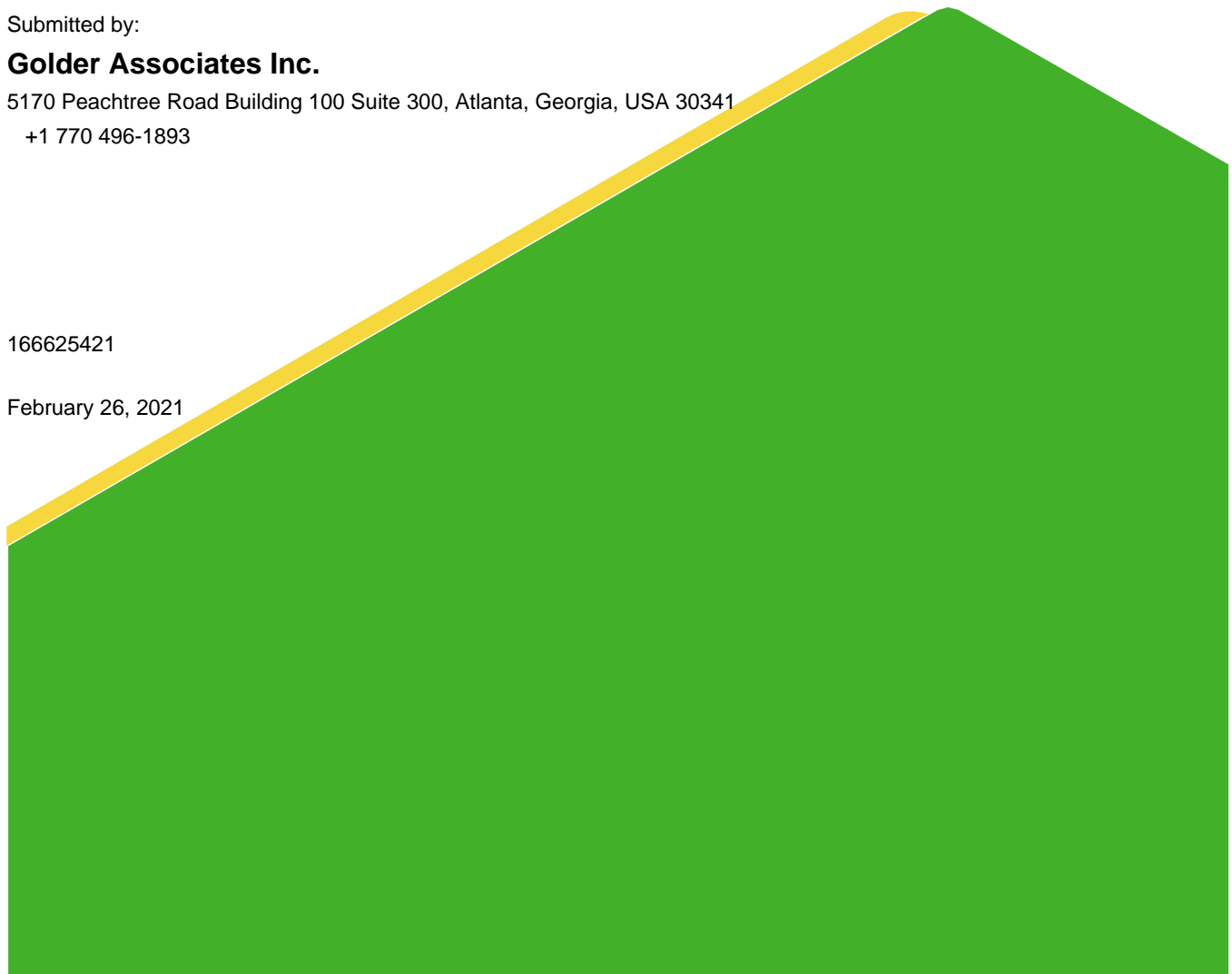
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Summary

This 2020 Semi-Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant Branch Ash Ponds B, C, and D (AP-BCD), Milledgeville, Putnam County, Georgia report provides the status of groundwater monitoring and corrective program August through December 2020. 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 6¹ 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 Plant Branch is no longer active and is currently decommissioned.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.

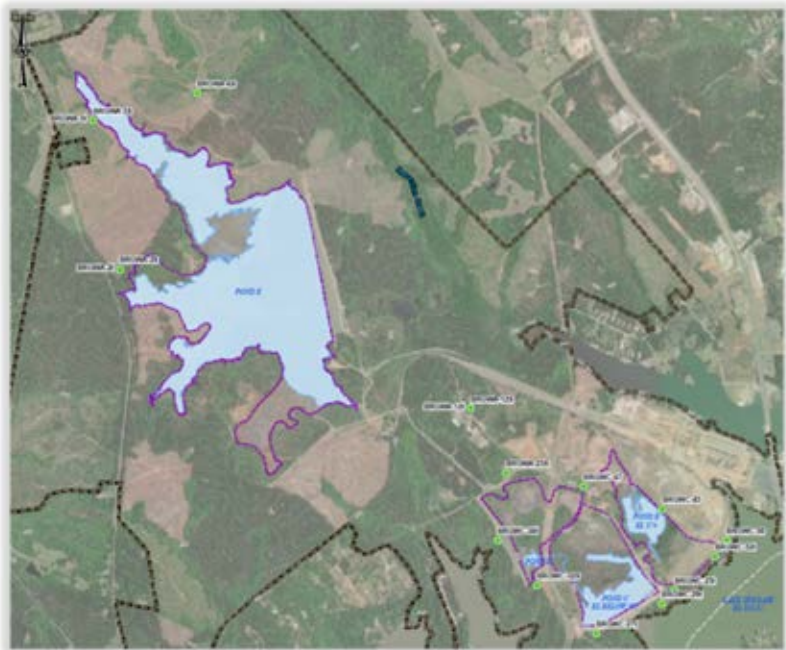


Figure 1: Plant Branch

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 2020 annual reporting period, the Site remained in assessment monitoring as corrective measures are evaluated.

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

Groundwater elevation measurements were recorded at the site monitoring wells 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.

2020 Semi-Annual Groundwater Monitoring Activities

There is no change to the AP-BCD certified detection network between August and December 2020. Groundwater monitoring sampling events for AP-BCD were conducted in August (annual) and September 2020 (Semi-annual). Groundwater samples were collected and analyzed for Appendix III² and Appendix IV³ required monitoring parameters from each of the detection and assessment monitoring wells.

Analytical data from the September 2020 monitoring events have been statistically analyzed in accordance with the site's certified statistical analysis method. For the September 2020 semi-annual monitoring event, 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

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.

² Appendix III: boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids

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

Table of Contents

1.0 INTRODUCTION	7
1.1 Site Description and Background	7
1.2 Site Geology and Hydrogeologic Setting	7
1.3 Groundwater Monitoring Well Network	8
2.0 GROUNDWATER MONITORING ACTIVITIES	8
2.1 Monitoring Well Installation and Maintenance	8
2.2 Assessment Monitoring	9
2.3 Additional Sampling	9
3.0 SAMPLE METHODOLOGY AND ANALYSIS	9
3.1 Groundwater Elevation Measurement	9
3.2 Groundwater Gradient and Flow Velocity	10
3.3 Groundwater Sampling	10
3.4 Laboratory Analyses	11
3.5 Quality Assurance and Quality Control	11
4.0 STATISTICAL ANALYSES	12
4.1 Statistical Method	12
4.1.1 Appendix III Assessment Monitoring Statistical Methods	13
4.1.2 Appendix IV Assessment Monitoring Statistical Methods	14
4.2 Statistical Analysis Results	15
4.2.1 September 2020 Appendix III Statistical Results	16
4.2.2 September 2020 Appendix IV Statistical Results	16
4.3 Assessment Monitoring & Delineation Status	16
5.0 MONITORING PROGRAM STATUS	16
6.0 CONCLUSIONS AND FUTURE ACTIONS	17
7.0 REFERENCES	18

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
Table 1	Monitoring Well Network Summary (AP-BCD)
Table 2	Groundwater Sampling Event Summary
Table 3	Summary of Groundwater Elevations
Table 4A	Groundwater Velocity Calculations – August 2020
Table 4B	Groundwater Velocity Calculations – September 2020
Table 5A	Analytical Data Summary - Pond BCD (August 2020)
Table 5B	Analytical Data Summary - Pond BCD (September and October 2020)
Table 5C	Analytical Data Summary – Surface Water - October 2020
Table 5D	Analytical Data Summary – Surface Water - February 2021

Appendices

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

Certification Statement

This 2020 Semi-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.

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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 *2020 Semi-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, however Plant Branch ceased producing electricity prior to April 2015. 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 § 257.90(e) and GA EPD Rule 391-3-4-.10(6)(a).

Two monitoring events were conducted during this monitoring period - an initial assessment monitoring event conducted in August 2020, and the subsequent semi-annual assessment monitoring event conducted in September 2020. This report documents the activities completed at Branch AP-BCD through the second half of 2020. 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 since the 1960's until its retirement in 2015. Plant Branch is no longer active and is currently 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 currently inactive, and will be closed by removal by relocation of the stored CCR material to a proposed fully lined landfill located on the plant property. 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 currently 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.

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.

The near surface conditions were determined based upon available boring and monitoring well installation logs. Based on our review of this information, 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 or regolith.

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, Monitoring Well Network Summary, 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 (August through December 2020).

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 log is included in Appendix A.

Two piezometers PZ-50D and PZ-51D were installed at the site to characterize and delineate the nature and extent of target constituents showing SSLs in groundwater at the Site. The piezometer installations are documented in a report, *Piezometer Installation Report for Surface Impoundment Ash Pond BCD, Georgia Power Company – Plant Branch, Milledgeville, Georgia*, dated November 20, 2020 (Golder, 2020a). The wells were surveyed by Metro Engineering & Surveying Co., Inc. The certified well survey for this work is included in Appendix A.

2.2 Assessment Monitoring

Pursuant to §257.94(e)(3), an assessment monitoring program has been 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 and September 2020 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-51S and PZ-51I. 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 semi-annual sampling event, 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, and Data Validation Summaries. A resampling event for PZ-51I was completed during October 2020 to confirm laboratory results of Appendix III constituents and target Appendix IV constituents cadmium and cobalt.

2.3 Additional Sampling

Additional sampling was conducted during the reporting period in support of the assessment of corrective measure 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.

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 the first semi-annual assessment monitoring event 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 in August and September 2020, 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, and Figure 4, AP-BCD Potentiometric Surface Elevation Contour Map – September 14, 2020. Review of Figures 3 and 4 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 and Table 4B, Groundwater Flow Velocity Calculations –September 2020. An effective porosity of 0.20 was used based on the default values for effective porosity recommended by USEPA for a silty sand-type soil (USEPA, 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 and 4B.

As presented on Tables 4A and 4B, groundwater flow velocity at the site ranges from approximately 0.19 to 0.90 feet per day (or approximately 69.7 to 333.3 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® (In-Situ field instrument) 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 mg/L; if DO < 0.5 milligrams per liter (mg/L), no stabilization criteria apply
- Turbidity measurements less than 5 nephelometric turbidity units (NTU)

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 SmarTroll®, 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. During the August 2020 sampling event, wells were sampled and analyzed for Appendix IV monitoring parameters pursuant to 40 CFR § 257.90(e)(3). The September 2020 event represents the second first semi-annual sampling event in 2020 for AP-BCD at Plant Branch. 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 and 5B, Analytical Data Summary, present a tabulated summary of the August and September 2020 sampling results, respectively. 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 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 control samples (QA/QC) 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 (USEPA, 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 assessment monitoring event. The report generated from the analyses is provided in Appendix B. The September 2020 data were 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 RCRA Facilities, Unified Guidance, (USEPA, 2009). The Sanitas Groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations and guidance as recommended in the US EPA (2009) document.

Table 4.1.1 Plant Branch AP-BCD Statistical Method Summary provides a summary of the statistical methodology used at AP-BCD for the groundwater monitoring conducted in September 2020 and will be used for any routine monitoring in the future.

Table 4.1.1: 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	PZ-51I and PZ-51S
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.

Table 4.1.1: PLANT BRANCH AP-BCD STATISTICAL METHOD SUMMARY		
	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"> ▪ Initial statistical exceedance warrants independent resampling within 90 days. ▪ If resample passes, well/parameter is not considered a confirmed statistically significant increase (SSI). ▪ If resample exceeds, well/parameter has a confirmed SSI. ▪ If no resample is collected, the original result is deemed verified.

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 assessment monitoring event 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 groundwater protection standard (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 is:

- (1) Cobalt 0.006 mg/L;
- (2) Lead 0.015 mg/L;
- (3) Lithium 0.040 mg/L;
- (4) Molybdenum 0.100 mg/L; or
- (5) 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 current 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, GWPSs were established for statistical comparison of Appendix IV constituents. Table 4.1.2, Summary of Background Levels and GWPSs, presented below, 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.

Table 4.1.2: SUMMARY OF BACKGROUND LEVELS AND GWPSs				
Analyte	Units	MCL	Site Specific Background September 2020 ^[1]	State-Derived GWPS ^[2]
Antimony	mg/L	0.006	0.012	0.012
Arsenic	mg/L	0.01	0.005	0.01
Barium	mg/L	2	0.13	2
Beryllium	mg/L	0.004	0.003	0.004
Cadmium	mg/L	0.005	0.0025	0.005
Chromium	mg/L	0.1	0.016	0.1
Cobalt	mg/L	NA	0.0135	0.0135
Fluoride	mg/L	4	0.42	4
Lead	mg/L	NA	0.005	0.005
Lithium ^[3]	mg/L	NA	0.089	0.089
Mercury	mg/L	0.002	0.0005	0.002
Molybdenum	mg/L	NA	0.01	0.01
Radium (226 + 228)	pCi/L	5	1.672	5
Selenium	mg/L	0.05	0.01	0.05
Thallium	mg/L	0.002	0.001	0.002

Notes:

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

MCL = Maximum Contaminant Level;

[1] The background limits are used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (EPD) Rule 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).

A summary table of the statistical results accompanies the prediction limits for Appendix III and confidence intervals for Appendix IV in Appendix B, Statistical Analyses. The background period for statistical analyses included data through September 2020. 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 event in September 2020 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 monitoring event are included in Appendix B, 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 B.

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

4.3 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 C). As part of the nature and extent study, two (2) horizontal delineation piezometers (PZ-51S and PZ-51I) 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. Piezometer PZ-51S and PZ-51I were installed in August 2018, while PZ-50D and PZ-51D were installed in October 2020. Piezometers PZ-50D and PZ-51I 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 well PZ-50D, and delineation PZ-51D, installed in 2020, are limited to less than four independent datums and therefore not subject to the statistical analyses.

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 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. Vertical delineation of cadmium and cobalt at well BRGWC-50 is complete. A summary of assessment monitoring data is presented in Tables 5B through 5D.

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 and 5B.

present progress toward selection and design of a groundwater remedy. A copy of the report is included as Appendix C, *Supplemental Semi-Annual Remedy Selection and Design Progress Report*, February 2021. At least 30 days prior to the selection of remedy or remedies, a public meeting to discuss the results of the corrective measures assessment will be held pursuant to 40 CFR 257.96(e).

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

Pursuant to 40 CFR 257.195(g)(1)(iv), the delineation wells will continue to be sampled as part of the ongoing semiannual assessment monitoring program.

6.0 CONCLUSIONS AND FUTURE ACTIONS

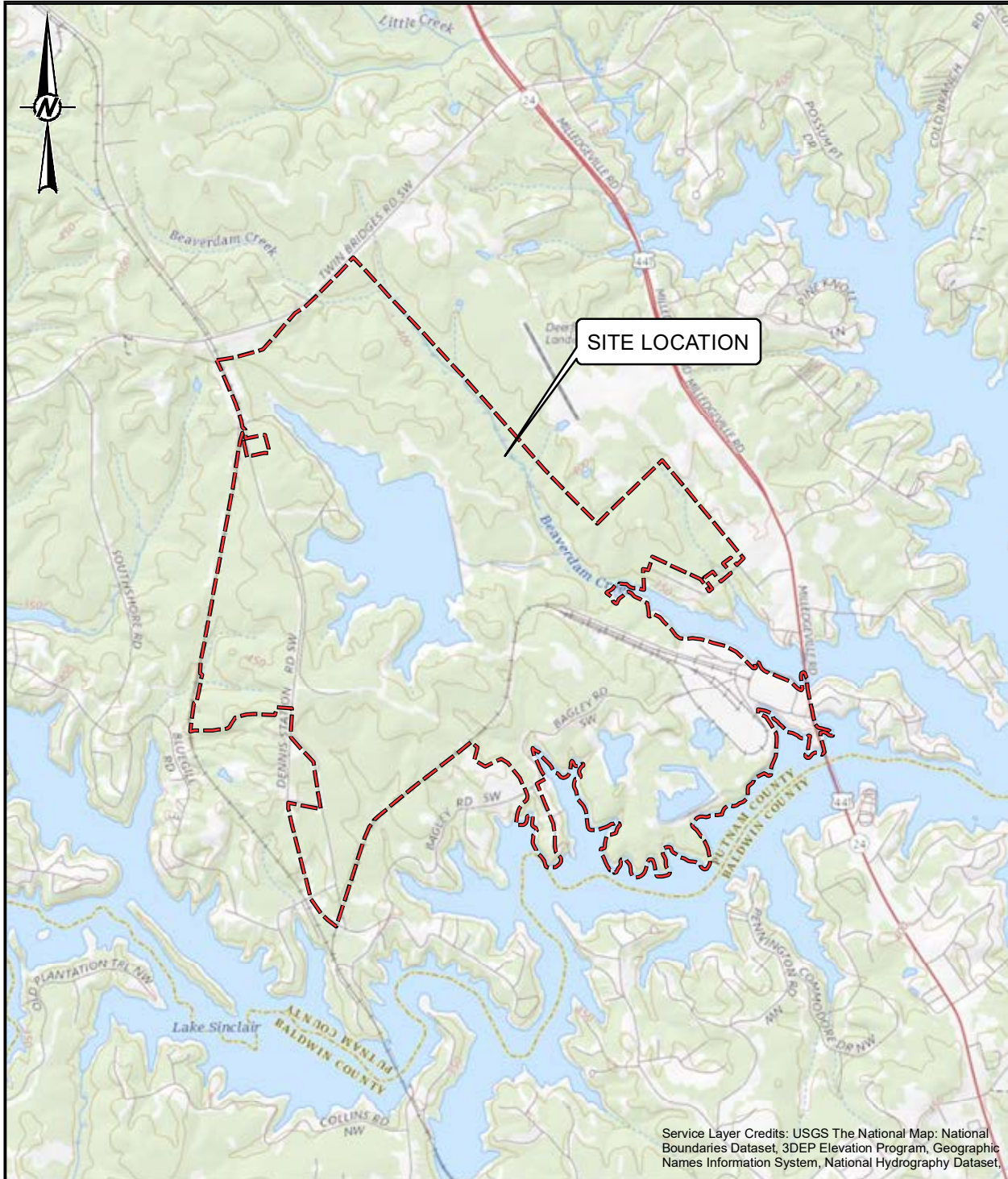
This *2020 Semi-Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Plant Branch AP-BCD* has been prepared to fulfill the requirements of GA EPD Rules of Solid Waste Management 391-3-4-.10(6). The groundwater flow direction and rates interpreted during the August 2020 and September 2020 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 first the quarter of 2021.

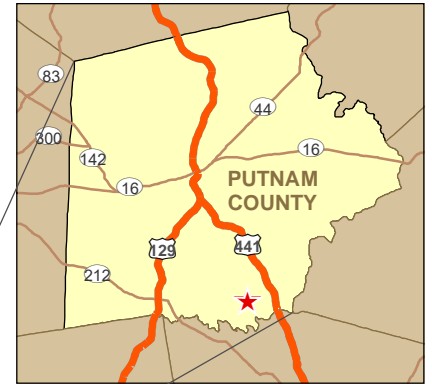
7.0 REFERENCES

- 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, 2020. Geologic and Hydrogeologic Summary Report, Georgia Power – Plant Branch, Putnam County, Georgia, November 2020.
- Golder Associates, 2020. Well Installation Report Addendum Ash Pond BCD, Georgia Power Plant Branch, Milledgeville, Georgia, October 2020.
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- USEPA, 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.
- USEPA. 2017. National Functional Guidelines for Inorganic Superfund Methods Data Review. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA-540-R-2017-001]. Washington. DC. January.

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
GROUNDWATER MONITORING

TITLE
SITE LOCATION MAP

CONSULTANT



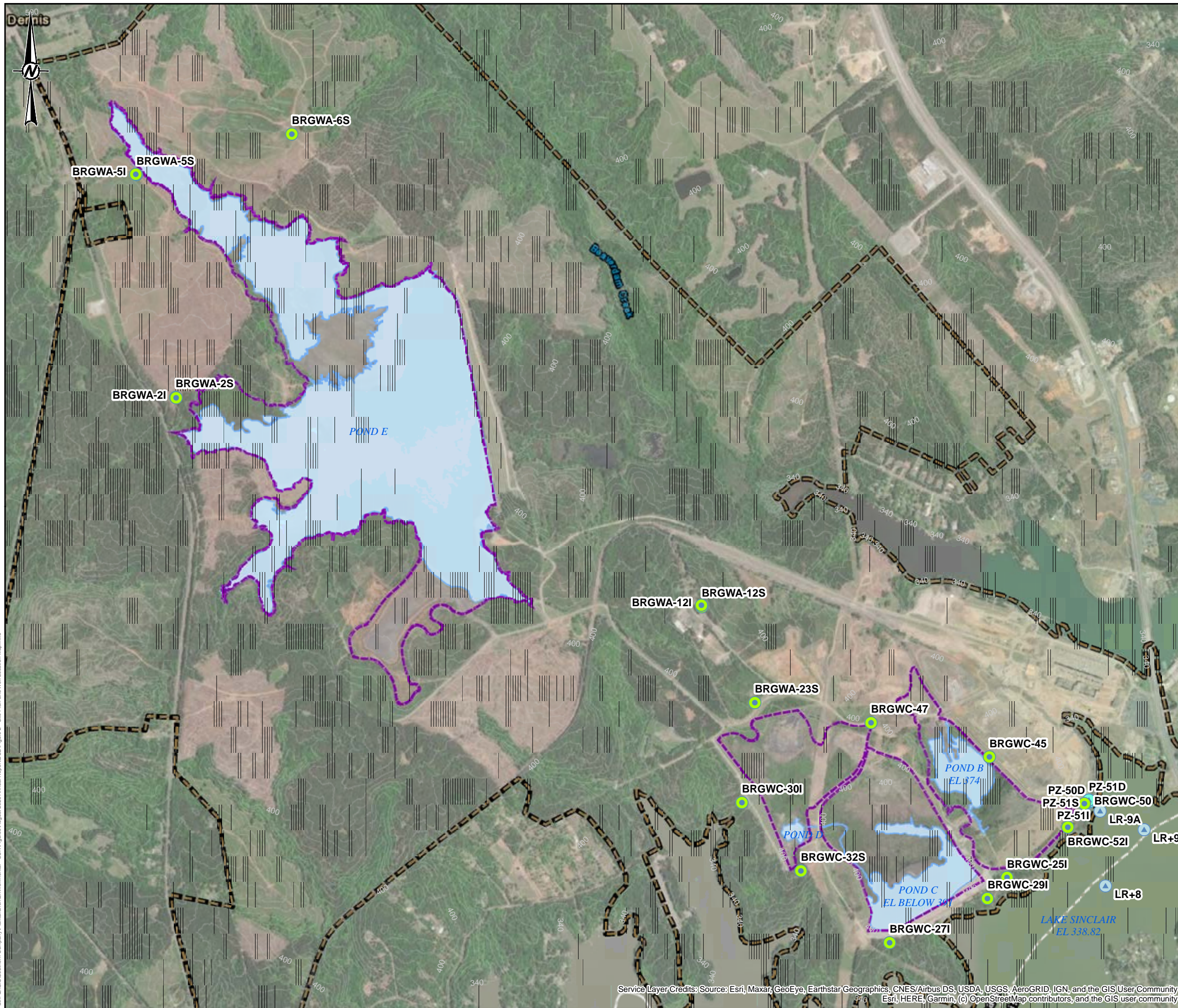
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PREPARED	DJC
DESIGN	DLP
REVIEW	RK
APPROVED	DLP

PROJECT No.
 166625421

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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. (JULY 2020).
 5. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



CLIENT
**GEORGIA POWER COMPANY
 PLANT BRANCH**

PROJECT
GROUNDWATER MONITORING PROGRAM

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

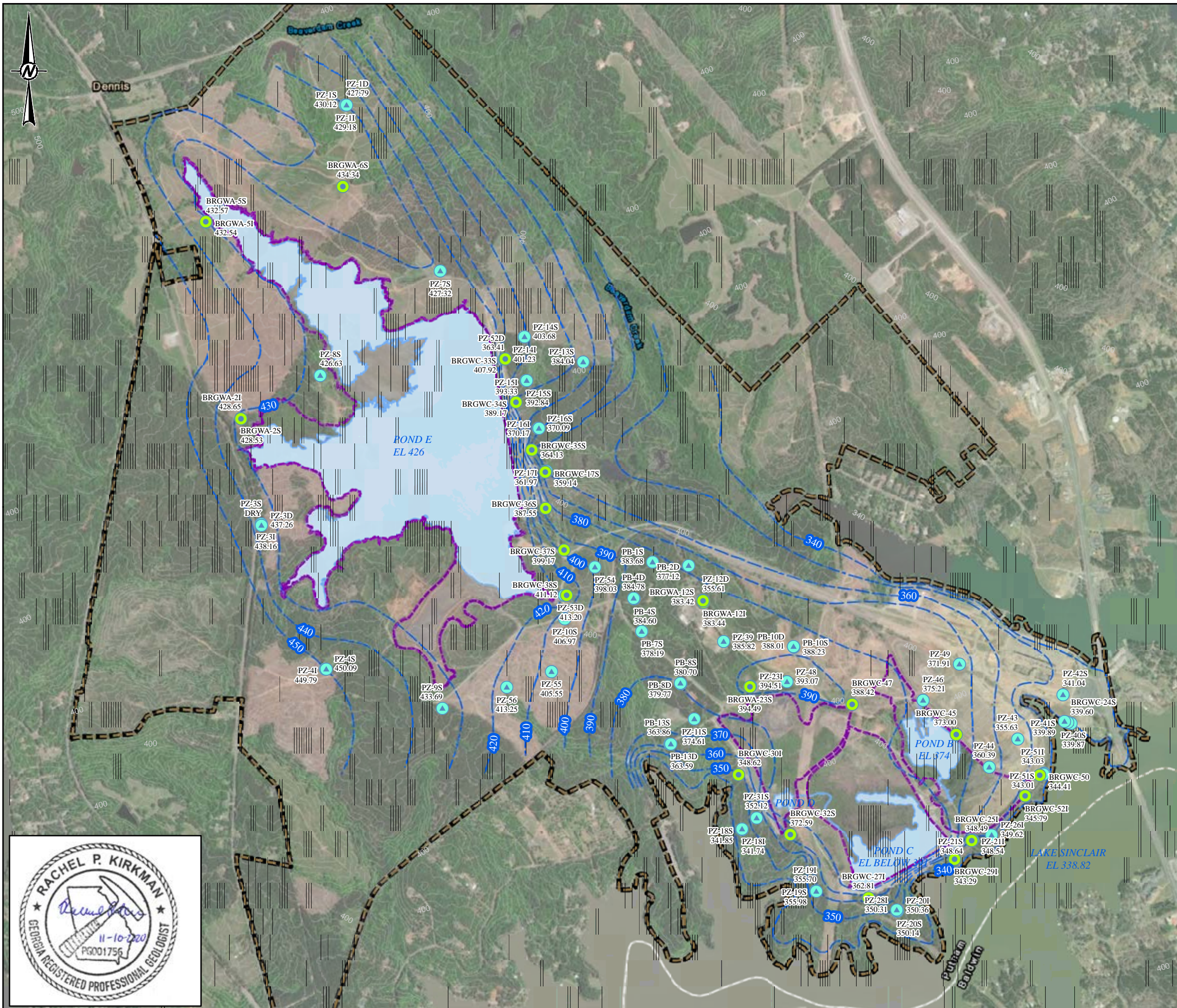
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	DESIGN	BAS
	REVIEW	RK
	APPROVED	DLP

PROJECT No. 166625421 CONTROL 1666254V001-GIS.mxd Rev. 0 FIGURE 2

Path: C:\GIS\Southern Company\PlantBranch\Environmental - CCR\Figures\August 2020 Annual Report\BOD\Figure 2 - Site Plan and Well Location Map.mxd

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

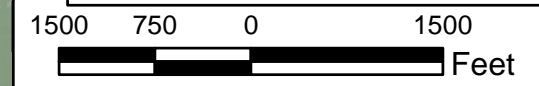
- MONITORING WELL
- PIEZOMETER
- PROPERTY BOUNDARY
- INFERRED POTENTIOMETRIC SURFACE (NAVD88)
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS

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 (D) AND INTERMEDIATE (I) WELL ELEVATIONS WERE NOT USED FOR GROUNDWATER CONTOURING.
4. NAVD88=NORTH AMERICAN VERTICAL DATUM 88
5. GROUNDWATER ELEVATIONS RECORDED AUGUST 17, 2020.

REFERENCE

1. SERVICE LAYER CREDITS: ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
SOURCE: ESRI, DIGITALGLOBE, 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. BORING/PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING & SURVEYING CO., INC. (JULY 2020).
4. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



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GEORGIA POWER COMPANY
 PLANT BRANCH

PROJECT
GROUNDWATER MONITORING PROGRAM

TITLE
POTENTIOMETRIC SURFACE CONTOUR
MAP AUGUST 17, 2020

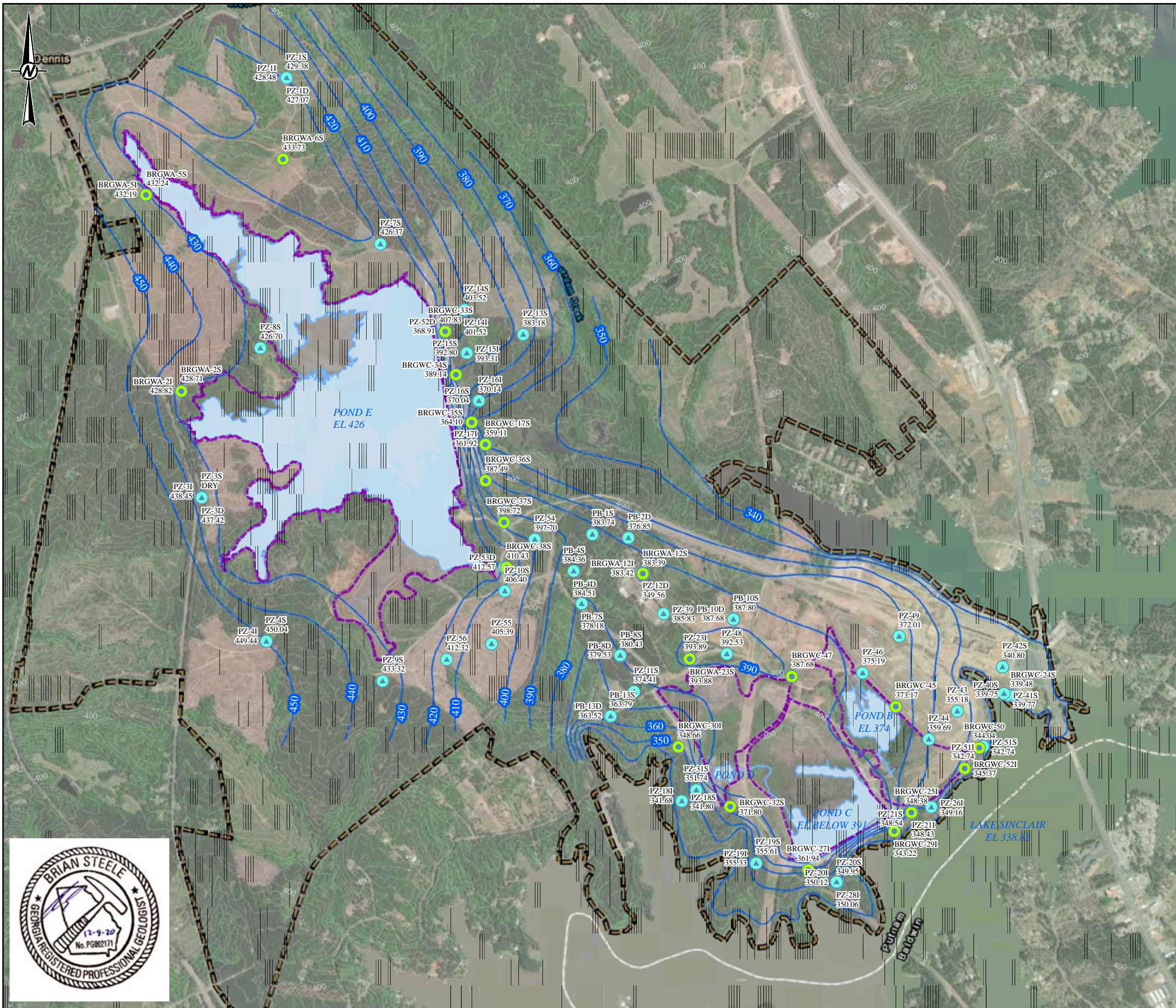
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	PREPARED	DJC
	DESIGN	ED
	REVIEW	RK
	APPROVED	DLP

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

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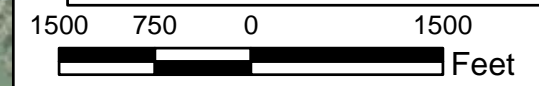
- MONITORING WELL
- PIEZOMETER
- INFERRED POTENTIOMETRIC SURFACE (NAVD88)
- PROPERTY BOUNDARY
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS

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 ELEVATIONS RECORDED SEPTEMBER 14, 2020.

REFERENCE

1. SERVICE LAYER CREDITS: ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY SOURCE: ESRI, DIGITALGLOBE, 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. BORING/PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING & SURVEYING CO., INC. (JULY 2020).
4. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



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GEORGIA POWER COMPANY
 PLANT BRANCH



PROJECT
GROUNDWATER MONITORING
 PROGRAM

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



TABLE 1 MONITORING WELL NETWORK SUMMARY (AP-BCD)

Georgia Power - Plant Branch
Milledgeville, GA

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened ^[3]	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) ^[1]	Top of Casing Elevation (feet NAVD88) ^[1]	Total Depth (feet bgs) ^[2]	Top of Screen Elevation (feet NAVD88) ^[1]	Screen Tip Elevation (feet NAVD88) ^[1]	Screen Length	Date of Installation
POND BCD												
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
ASH POND BCD ASSESSMENT WELLS												
PZ-50D	PZ-52	Downgradient	Biotite Gneiss	33.190410	-83.297817	378.3	380.86	106.0	282.30	272.30	10.0	10/8/2020
PZ-51I	PZ-52	Downgradient	Saprolite/TWR/Biotite Gneiss	33.190523	-83.297623	378.0	380.52	65.0	323.10	313.10	10.0	8/1/2018

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

TABLE 2
GROUNDWATER SAMPLING EVENT SUMMARY
Georgia Power Company - Plant Branch
Milledgeville, Georgia

Well ID	Hydraulic Location	Summary of Sampling Events			Status of Monitoring Well
		August 2020	September 2020	November 2020	
Purpose of Sampling Event		Annual Appendix IV Scan	Compliance / Assessment	Compliance / Assessment	
ASH PONDS B, C, and D (AP-BCD)					
BRGWA-2S	Upgradient	Scan02	A03	-	Assessment
BRGWA-2I	Upgradient	Scan02	A03	-	Assessment
BRGWA-5S	Upgradient	Scan02	A03	-	Assessment
BRGWA-5I	Upgradient	Scan02	A03	-	Assessment
BRGWA-6S	Upgradient	Scan02	A03	-	Assessment
BRGWA-12S	Upgradient	Scan02	A03	-	Assessment
BRGWA-12I	Upgradient	Scan02	A03	-	Assessment
BRGWA-23S	Upgradient	Scan02	A03	-	Assessment
BRGWC-25I	Downgradient	Scan02	A03	-	Assessment
BRGWC-27I	Downgradient	Scan02	A03	-	Assessment
BRGWC-29I	Downgradient	Scan02	A03	-	Assessment
BRGWC-30I	Downgradient	Scan02	A03	-	Assessment
BRGWC-32S	Downgradient	Scan02	A03	-	Assessment
BRGWC-45	Downgradient	Scan02	A03	-	Assessment
BRGWC-47	Downgradient	Scan02	A03	-	Assessment
BRGWC-50	Downgradient	Scan02	A03	-	Assessment
BRGWC-52I	Downgradient	Scan02	A03	-	Assessment
PZ-50D*	Downgradient	not installed	-	A03	Assessment
PZ-51S	Downgradient	Scan02	A03	-	Assessment
PZ-51I*	Downgradient	Scan02	A03	A03	Assessment
PZ-51D	Downgradient	not installed	-	A03	Assessment

Notes:

Scan## = Annual Appendix IV Scan

A## = Assessment Monitoring Event Number

“-” = Not Sampled

* = AP-BCD Assessment Well

TABLE 3
Summary of Groundwater Elevations
 Georgia Power Company- Plant Branch
 Milledgeville, Georgia

Well-ID	Top of Casing Elevation (feet NAVD88) ^[1]	GROUNDWATER ELEVATIONS (FEET NAVD88)	
		8/17/2020	9/14/2020
POND BCD			
BRGWA-12S	434.64	383.42	383.39
BRGWA-12I	434.39	383.44	383.92
BRGWA-23S	428.24	394.49	393.88
BRGWC-25I	357.37	348.49	348.38
BRGWC-27I	366.86	362.81	361.94
BRGWC-29I	353.23	343.29	343.22
BRGWC-30I	352.61	348.62	348.66
BRGWC-32S	406.39	372.59	371.80
BRGWC-45	384.58	373.00	373.17
BRGWC-47	411.20	388.42	387.68
BRGWC-50	381.35	344.41	344.04
BRGWC-52I	383.87	345.79	345.37

TABLE 3
Summary of Groundwater Elevations
 Georgia Power Company- Plant Branch
 Milledgeville, Georgia

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

TABLE 3
Summary of Groundwater Elevations
 Georgia Power Company- Plant Branch
 Milledgeville, Georgia

Well-ID	Top of Casing Elevation (feet NAVD88) ^[1]	GROUNDWATER ELEVATIONS (FEET NAVD88)	
		8/17/2020	9/14/2020
PIEZOMETERS			
PZ-1S	465.07	430.12	429.38
PZ-1I	464.71	429.18	428.48
PZ-1D	463.41	427.79	427.07
PZ-3S	490.53	DRY	DRY
PZ-3I	489.49	438.16	438.45
PZ-3D	487.50	437.26	437.42
PZ-4S	482.87	450.09	450.04
PZ-4I	482.98	449.79	449.44
PZ-7S	451.57	427.32	426.37
PZ-8S	453.08	426.63	426.70
PZ-9S	469.28	433.69	433.32
PZ-10S	433.85	406.97	406.40
PZ-11S	393.99	374.61	374.41
PZ-12D	434.09	355.61	349.56
PZ-13S	409.97	384.04	383.18
PZ-14S	423.31	403.68	403.52
PZ-14I	422.71	401.23	401.52
PZ-15S	402.90	392.84	392.80
PZ-15I	403.06	393.33	393.31
PZ-16S	382.52	370.09	370.04
PZ-16I	382.45	370.17	370.14
PZ-17I	365.33	361.97	361.92
PZ-18S	362.82	341.85	341.80
PZ-18I	362.55	341.74	341.68
PZ-19S	371.42	355.98	355.61
PZ-19I	371.74	355.70	355.33
PZ-20S	365.41	350.14	349.95
PZ-20I	365.34	350.36	350.12
PZ-21S	358.52	348.64	348.54

TABLE 3
Summary of Groundwater Elevations
 Georgia Power Company- Plant Branch
 Milledgeville, Georgia

Well-ID	Top of Casing Elevation (feet NAVD88) ^[1]	GROUNDWATER ELEVATIONS (FEET NAVD88)	
		8/17/2020	9/14/2020
PIEZOMETERS			
PZ-21I	358.92	348.54	348.43
PZ-23I	427.74	394.51	393.89
BRGWC-24S	354.10	339.60	339.48
PZ-26I	370.63	349.62	349.16
PZ-28I	364.81	350.31	350.06
PZ-31S	376.77	352.12	351.74
PZ-39	434.78	385.82	385.83
PZ-40S	355.96	339.87	339.75
PZ-41S	357.17	339.89	339.77
PZ-42S	361.66	341.04	340.80
PZ-43	383.71	355.63	355.18
PZ-44	383.04	360.39	359.69
PZ-46	384.64	375.21	375.19
PZ-48	420.90	393.07	392.53
PZ-49	384.99	371.91	372.01
PZ-51S	380.27	343.01	342.74
PZ-51I	380.52	343.03	342.74
PZ-52D	417.03	363.41	368.91
PZ-53D	434.68	413.20	412.57
PZ-54	443.86	398.03	397.70
PZ-55	453.07	405.55	405.39
PZ-56	418.84	413.25	412.32

TABLE 3
Summary of Groundwater Elevations
 Georgia Power Company- Plant Branch
 Milledgeville, Georgia

Well-ID	Top of Casing Elevation (feet NAVD88) ^[1]	GROUNDWATER ELEVATIONS (FEET NAVD88)	
		8/17/2020	9/14/2020
Temporary Landfill Piezometers			
PB-1S	403.16	383.68	383.74
PB-2D	416.71	377.12	376.85
PB-4S	411.15	384.60	384.36
PB-4D	412.12	384.78	384.51
PB-7S	402.88	378.19	378.18
PB-8S	401.82	380.70	380.43
PB-8D	401.74	379.77	379.53
PB-10S	400.91	388.23	387.80
PB-10D	400.31	388.01	387.68
PB-13S	373.31	363.86	363.79
PB-13D	373.77	363.59	363.52

Notes:

1. Feet NAVD88 = feet North American Vertical Datum 1988
2. Updated survey data for all wells provided by Metro Engineering in July 2020

TABLE 4A
GROUNDWATER VELOCITY CALCULATIONS (August 2020)
Georgia Power - Plant Branch Ash Pond AP-BCD
Milledgeville, GA

Flow Paths	Groundwater Elevation (feet NAVD88) ⁷	Δ H (feet) ¹	Δ L (feet) ²	Hydraulic Gradient (Δ H/Δ L) ³	Average Hydraulic Conductivity, K (feet per day) ⁵	Assumed Effective Porosity (n _e) ⁶	Average Linear Groundwater Velocity	
							(feet per day) ⁴	(feet per year) ⁴
Pond BCD August 17, 2020								
BRGWA-23S / BRGWC-30I	394.49	45.87	1374.0	0.033	2.73 to 5.47	0.2	0.46 to 0.91	166.3 to 333.3
	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	70.1 to 140.4
	344.41							

Notes:

1. Δ H = Change in groundwater elevation.
2. Δ 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 (September 2020)
Georgia Power - Plant Branch Ash Pond AP-BCD
Milledgeville, GA

Flow Paths	Groundwater Elevation (feet NAVD88) ⁷	Δ H (feet) ¹	Δ L (feet) ²	Hydraulic Gradient (Δ H/Δ L) ³	Average Hydraulic Conductivity, K (feet per day) ⁵	Assumed Effective Porosity (n _e) ⁶	Average Linear Groundwater Velocity	
							(feet per day) ⁴	(feet per year) ⁴
Pond BCD September 14, 2020								
BRGWA-23S / BRGWC-30I	393.88	45.22	1375.0	0.033	2.73 to 5.47	0.2	0.45 to 0.90	163.9 to 328.3
	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	69.7 to 139.6
	344.04							

Notes:

1. Δ H = Change in groundwater elevation.
2. Δ 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 - POND BCD (August 2020)
 GPC PLANT BRANCH
 MILLDEGEVILLE, GEORGIA

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	8/18/2020	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
Appendix III																				
BORON, TOTAL	mg/L	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
CALCIUM, TOTAL	mg/L	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
CHLORIDE, TOTAL	mg/L	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
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	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
TOTAL DISSOLVED SOLIDS	mg/L	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
Appendix IV																				
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.

TABLE 5B
ANALYTICAL DATA SUMMARY - POND BCD (September and October 2020)
 GPC PLANT BRANCH
 MILLDEGEVILLE, GEORGIA

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
Appendix III																							
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
Appendix IV																							
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	NA	0.00043 J	< 0.00028	NA	NA	< 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	NA	< 0.00078	< 0.00078	NA	NA	< 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	NA	0.033	0.015	NA	NA	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	NA	< 0.000046	0.000096 J	NA	NA	< 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	NA	< 0.00055	0.00098 J	NA	NA	< 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	NA	< 0.000036	0.00036 J	NA	NA	< 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	NA	< 0.00081	0.021 J	NA	NA	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	NA	< 0.000078	< 0.000078	NA	NA	< 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	NA	< 0.00069	< 0.00069	NA	NA	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	NA	0.952 U	1.76	NA	NA	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	NA	< 0.0016	< 0.0016	NA	NA	< 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	NA	< 0.00014	< 0.00014	NA	NA	< 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.

TABLE 5C
ANALYTICAL DATA SUMMARY
Surface Water - October 2020

Georgia Power - Plant Branch
Milledgeville, Georgia

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
Appendix III					
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
Appendix IV					
Cadmium, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050
Other					
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 ₃)	mg/L	24.2	25.6	25.8	26.5
Alkalinity, Total (CaCO ₃)	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 5D
ANALYTICAL DATA SUMMARY
Surface Water - February 2021
 Georgia Power - Plant Branch
 Milledgeville, Georgia

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
Appendix III						
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
Appendix IV						
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
Cations/Anions						
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 ₃)	mg/L	25.8	24.3	24.2	24.9	24.6
Alkalinity, Total (CaCO ₃)	mg/L	25.8	24.3	24.2	24.9	24.6
Field Parameters						
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.

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

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

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

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

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

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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

REPORT OF LABORATORY ANALYSIS

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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
92491389001	BRGWA-5I					
	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	
92491389002	BRGWA-5S					
	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	
92491389003	BRGWA-2I					
	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				

REPORT OF LABORATORY ANALYSIS

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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
92491389003	BRGWA-2I					
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	
92491389004	BRGWA-2S					
	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	
92491389005	BRGWA-6S					
	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.29	Std. Units			1		09/09/20 17:00		
6020 MET ICPMS									
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	
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 12:37	7439-97-6	
300.0 IC Anions 28 Days									
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	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.41	Std. Units			1		09/09/20 17:00		
6020 MET ICPMS									
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	
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 12:47	7439-97-6	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.59	Std. Units			1		09/09/20 17:00		
6020 MET ICPMS									
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	
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 12:49	7439-97-6	
300.0 IC Anions 28 Days									
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	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.06	Std. Units			1		09/09/20 17:00		
6020 MET ICPMS									
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	
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 12:51	7439-97-6	
300.0 IC Anions 28 Days									
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	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.33	Std. Units			1		09/09/20 17:00		
6020 MET ICPMS									
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	
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 12:58	7439-97-6	
300.0 IC Anions 28 Days									
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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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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0026	0.0026	104	106	75-125	2	20	

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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

Sample: BRGWA-5I **Lab ID: 92491389001** Collected: 08/18/20 09:40 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	0.0774 ± 0.196 (0.479) C:76% T:NA	pCi/L	09/02/20 07:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.453 ± 0.459 (0.950) C:53% T:92%	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.530 ± 0.655 (1.43)	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
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:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.241 ± 0.241 (0.446) C:86% T:NA	pCi/L	09/02/20 07:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.340 ± 0.449 (0.959) C:59% T:93%	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.581 ± 0.690 (1.41)	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
Sample: BRGWA-2I Lab ID: 92491389003 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	0.0861 ± 0.243 (0.593) C:77% T:NA	pCi/L	09/02/20 07:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.176 ± 0.358 (0.872) C:61% T:91%	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.0861 ± 0.601 (1.47)	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
Sample: BRGWA-2S Lab ID: 92491389004 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	0.189 ± 0.267 (0.570) C:70% T:NA	pCi/L	09/02/20 07:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.03 ± 0.516 (0.891) C:61% T:81%	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.22 ± 0.783 (1.46)	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
Sample: BRGWA-6S Lab ID: 92491389005 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	-0.0918 ± 0.174 (0.573) C:79% T:NA	pCi/L	09/02/20 08:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.453 ± 0.384 (0.763) C:66% T:81%	pCi/L	09/09/20 12:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.453 ± 0.558 (1.34)	pCi/L	09/10/20 13:23	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

QC Batch:	411435	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

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

METHOD BLANK: 1990342 Matrix: Water

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

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.664 ± 0.374 (0.672) C:70% T:89%	pCi/L	09/09/20 12:03	

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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

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#	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-)		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/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)				

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
 Purchased By (print): Travis Mart nez, Andrea McClure
 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	Lab Profile/Line:	
				Lab Sample Receipt Checklist:	Lab Sample # / Comments:
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	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:	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
 Relinquished by/Company: (Signature) *J. Golder* Date/Time: 8-19-2020/0815
 Relinquished by/Company: (Signature) Date/Time:
 Relinquished by/Company: (Signature) Date/Time:

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

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

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

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

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

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

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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
92491393001	BRGWA-12I					
	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) C:91% T:NA	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	0.748 ± 0.489 (0.931) C:70% T:80%	pCi/L		09/09/20 14:47	
Total Radium Calculation	Total Radium	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	
92491393002	BRGWA-12S					
	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) C:90% T:NA	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	0.812 ± 0.497 (0.953) C:70% T:90%	pCi/L		09/09/20 11:25	
Total Radium Calculation	Total Radium	0.969 ± 0.608 (1.14)	pCi/L		09/10/20 15:16	
92491393003	BRGWA-23S					
	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) C:84% T:NA	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	0.587 ± 0.442 (0.866) C:72% T:79%	pCi/L		09/09/20 11:25	

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					
92491393003	BRGWA-23S					
Total Radium Calculation	Total Radium	0.784 ± 0.555 (1.04)	pCi/L		09/10/20 15:16	
92491393004	BRGWC-25I					
	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)	pCi/L		09/09/20 11:25	
		C:72% T:90%				
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
92491393005	BRGWC-29I					
	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)	pCi/L		09/09/20 11:25	
		C:77% T:82%				
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	
92491393006	BRGWC-27I					
	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	

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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
92491393006	BRGWC-271					
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	
92491393007	BRGWC-32S					
	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	
92491393008	BRGWC-30I					
	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	

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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					
92491393009	BRGWC-45					
	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	
92491393010	BRGWC-47					
	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	
92491393011	BRGWC-50					
	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
92491393011	BRGWC-50					
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) C:89% T:NA	pCi/L		09/03/20 18:18	
EPA 9320	Radium-228	2.04 ± 0.699 (0.948) C:71% T:67%	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	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	
92491393012	BRGWC-52I					
	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) C:84% T:NA	pCi/L		09/04/20 07:17	
EPA 9320	Radium-228	2.29 ± 0.728 (0.901) C:70% T:69%	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	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	
92491393013	DUP-2					
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) C:87% T:NA	pCi/L		09/04/20 07:18	

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
92491393013	DUP-2					
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	
92491393014	FB-2					
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	
92491393015	EB-1					
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.25	Std. Units			1		09/09/20 17:01		
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	
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.75	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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 13:03	7439-97-6	
300.0 IC Anions 28 Days									
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	

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.56	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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 13:06	7439-97-6	
300.0 IC Anions 28 Days									
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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: BRGWC-25I									
Lab ID: 92491393004									
Collected: 08/19/20 09:50 Received: 08/20/20 10:03 Matrix: Water									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.32	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
7470 Mercury									
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	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.67	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
7470 Mercury									
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	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.81	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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	08/24/20 11:30	08/25/20 10:15	7439-97-6	
300.0 IC Anions 28 Days									
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			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.97	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
7470 Mercury									
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	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.36	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
7470 Mercury									
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	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.86	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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	08/24/20 11:30	08/25/20 10:27	7439-97-6	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.75	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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	08/24/20 11:30	08/25/20 10:29	7439-97-6	
300.0 IC Anions 28 Days									
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	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.26	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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	08/24/20 11:30	08/25/20 10:32	7439-97-6	
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.85	Std. Units			1		09/09/20 17:01		
6020 MET ICPMS									
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	
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	08/24/20 11:30	08/25/20 10:34	7439-97-6	
300.0 IC Anions 28 Days									
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
6020 MET ICPMS		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	0.019	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 17:10	7440-39-3	
Beryllium	0.0046	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 17:10	7440-41-7	
Cadmium	0.0077	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 17:10	7440-43-9	
Chromium	0.00065J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 17:10	7440-47-3	
Cobalt	1.4	mg/L	0.025	0.0019	5	08/24/20 15:10	08/28/20 15:13	7440-48-4	
Lead	0.000050J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 17:10	7439-92-1	
Lithium	0.041	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	0.0038J	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	
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	08/24/20 11:30	08/25/20 10:37	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.38	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: FB-2		Lab ID: 92491393014		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	
6020 MET ICPMS		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		
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	08/24/20 11:30	08/25/20 10:39	7439-97-6		
300.0 IC Anions 28 Days		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				
6020 MET ICPMS									
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	
7470 Mercury									
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 09:25	7439-97-6	
300.0 IC Anions 28 Days									
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	

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 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		

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 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	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491455013	Result	Spike Conc.	Spike Conc.							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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REPORT OF LABORATORY ANALYSIS

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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
		92491455013 Result	MS Spike Conc.	MSD Spike Conc.	MS 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	2980661		2980662		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491663009 Result	MS Spike Conc.	MSD 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	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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	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	92491663001 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	0.0023	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
		92490037006 Result	MS Spike Conc.	MSD Spike Conc.	MS 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
		92491455002 Result	MS Spike Conc.	MSD Spike Conc.	MS 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	0.240 ± 0.122 (0.185) C:91% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.748 ± 0.489 (0.931) C:70% T:80%	pCi/L	09/09/20 14:47	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.988 ± 0.611 (1.12)	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-12S **Lab ID: 92491393002** Collected: 08/18/20 16:25 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	0.157 ± 0.111 (0.189) C:90% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.812 ± 0.497 (0.953) C:70% T:90%	pCi/L	09/09/20 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.969 ± 0.608 (1.14)	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	0.197 ± 0.113 (0.177) C:84% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.587 ± 0.442 (0.866) C:72% T:79%	pCi/L	09/09/20 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.784 ± 0.555 (1.04)	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
Sample: BRGWC-25I Lab ID: 92491393004 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	0.288 ± 0.130 (0.188) C:86% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.179 ± 0.343 (0.752) C:72% T:90%	pCi/L	09/09/20 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.467 ± 0.473 (0.940)	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
Sample: BRGWC-29I Lab ID: 92491393005 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	0.299 ± 0.162 (0.267) C:91% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.577 ± 0.428 (0.848) C:77% T:82%	pCi/L	09/09/20 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.876 ± 0.590 (1.12)	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
Sample: BRGWC-271 Lab ID: 92491393006 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	0.260 ± 0.132 (0.203) C:91% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.424 ± 0.358 (0.718) C:74% T:87%	pCi/L	09/09/20 11:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.684 ± 0.490 (0.921)	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
Sample: BRGWC-32S Lab ID: 92491393007 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	0.0531 ± 0.0881 (0.172) C:92% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.429 ± 0.407 (0.839) C:75% T:82%	pCi/L	09/09/20 11:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.482 ± 0.495 (1.01)	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

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

Sample: BRGWC-45 **Lab ID: 92491393009** Collected: 08/20/20 12:12 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	0.194 ± 0.154 (0.275) C:88% T:NA	pCi/L	09/03/20 18:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.307 ± 0.468 (1.01) C:62% T:74%	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.501 ± 0.622 (1.29)	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	0.500 ± 0.164 (0.181) C:86% T:NA	pCi/L	09/03/20 18:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.14 ± 0.652 (1.17) C:53% T:73%	pCi/L	09/09/20 15:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.64 ± 0.816 (1.35)	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	0.735 ± 0.193 (0.151) C:89% T:NA	pCi/L	09/03/20 18:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.04 ± 0.699 (0.948) C:71% T:67%	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.78 ± 0.892 (1.10)	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	0.684 ± 0.388 (0.589) C:84% T:NA	pCi/L	09/04/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.29 ± 0.728 (0.901) C:70% T:69%	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.97 ± 1.12 (1.49)	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	0.602 ± 0.324 (0.420) C:87% T:NA	pCi/L	09/04/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.11 ± 0.682 (0.878) C:71% T:75%	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.71 ± 1.01 (1.30)	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	0.0152 ± 0.200 (0.536) C:84% T:NA	pCi/L	09/04/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.713 ± 0.432 (0.796) C:69% T:83%	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.728 ± 0.632 (1.33)	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	0.115 ± 0.167 (0.346) C:89% T:NA	pCi/L	09/04/20 07:51	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.206 ± 0.334 (0.724) C:69% T:84%	pCi/L	09/09/20 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.321 ± 0.501 (1.07)	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
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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
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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	

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
Pace Project No.: 92491393

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

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	

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

Pace Project No.: 92491393

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

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

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



92491393

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)

F-ALLC003rev.3. 11September2006



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-)		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-)		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)		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 To: scsinvoices@southernco.com

Copy To: Goldier
 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:
 Yes No

Rush
 Same Day Next Day
 2 Day 3 Day 4 Day 5 Day
 (Expedite Charges Apply)

Field Filtered (if applicable):
 Yes No

Analyst: _____

* 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

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

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 (<50 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: 7.6
 Cooler 1 Therm Corr. Factor: OC
 Cooler 1 Corrected Temp: 7.6
 Comments:

Relinquished by/Company (Signature): Joju Abraham / Goldier Date/Time: 8-19-2020 / 0815
 Received by/Company (Signature): Cheryl [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
 Address: 2480 Maner Road
 Atlanta, GA 30339
 Report To: Jojo Abraham
 Copy To: Golder

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

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

Project Name: Plant Branch BCD Network
 Project # CCR
 Purchase Order #
 Quote #
 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: _____

* 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
	X	X	X	X
	X	X	X	X
	X	X	X	X
	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: 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

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 8-20-2020/0815
 Received by/Company: (Signature) *[Signature]* Date/Time: 8/20/20 1003

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: _____

Temp Blank Received: Y N NA
 Therm ID#: TH20230
 Cooler 1 Temp Upon Receipt: 5°C
 Cooler 1 Therm Corr. Factor: DoC
 Cooler 1 Corrected Temp: 15°C
 Comments: _____

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: scsinvoices@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 _____

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

Lab Profile/Line:
Lab Sample # / Comments: 92491303
009
010
011
Rad-3 (+2 Radium) 012
017
019
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: 4°C
Cooler 1 Therm Corr. Factor: 0°C
Cooler 1 Corrected Temp: 3.9°C
Comments:

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

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1989998
MB concentration:	0.135
M/B 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	LCSD (Y or N)?	
	LCS55839	LCS55839
Count Date:	9/4/2020	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.045	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	4.785	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.098	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782	
Numerical Performance Indicator:	-1.72	
Percent Recovery:	85.84%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	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.:	92491393012	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92491393012DUP	
Sample Result (pCi/L, g, F):	0.684	
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:	1.327	
Duplicate RPD:	57.84%	92491393012
Duplicate Status vs Numerical Indicator:	N/A	92491393012DUP
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. N/A

LAL 9/4/2020

LAL 9/4/2020

Quar...



Quality Control Sample Performance Assessment

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	1989998	
MB concentration:	0.135	
M/B 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	LCSD (Y or N)?	N
	LCSD55839	LCSD55839
Count Date:	9/4/2020	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.045	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	4.785	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.098	
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 Limits:	125%	
Lower % Recovery Limits:	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	LCSD (Y or N)?	N
Sample I.D.:	92491663008	Enter Duplicate
Duplicate Sample I.D.:	92491663008DUP	sample IDs if
Sample Result (pCi/L, g, F):	0.467	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.143	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	0.359	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.256	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	0.728	
Duplicate RPD:	26.34%	92491663008
Duplicate Status vs Numerical Indicator:	N/A	92491663008DUP
Duplicate Status vs RPD:	Fail***	
% 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:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A CAM 9/4/2020

Cam 9/4/20



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	1994519	
MB concentration:	0.075	
M/B 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)?	Y
	LCSD55962	LCSD55962
Count Date:	9/9/2020	9/9/2020
Spike I.D.:	19-033	19-033
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):	0.057	0.057
Result (pCi/L, g, F):	4.703	4.482
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.784	0.767
Numerical Performance Indicator:	-0.13	-0.69
Percent Recovery:	98.88%	94.27%
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 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.:	LCSD55962	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD55962	
Sample Result (pCi/L, g, F):	4.703	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.784	
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:	0.395	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	4.77%	
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:

LAL 9/9/2020

LAL 9/9/20



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	1994519	
MB concentration:	0.075	
M/B 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)?	N
	LCS55962	LCSD55962
Count Date:	9/9/2020	
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/L, g, F):	4.757	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.703	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.784	
Numerical Performance Indicator:	-0.13	
Percent Recovery:	98.88%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	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.:	92491393007	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92491393007DUP	
Sample Result (pCi/L, g, F):	0.053	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.088	
Sample Duplicate Result (pCi/L, g, F):	0.094	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.086	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.651	92491393007
Duplicate RPD:	55.49%	92491393007DUP
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. N/A

UAM 9/9/2020

UAM 9/9/2020

UAM 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	1990347
MB concentration:	0.274
M/B 2 Sigma CSU:	0.326
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	LCSD (Y or N)?	
	LCSD55853	LCSD55853
Count Date:	9/9/2020	9/9/2020
Spike I.D.:	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	4.736
Uncertainty (Calculated):	0.233	0.232
Result (pCi/L, g, F):	4.963	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%	118.30%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	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 Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCSD55853	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD55853	
Sample Result (pCi/L, g, F):	4.963	
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:	-0.762	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.36%	
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, 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:

JV
9-10-20

CM
9/10/2020



Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: VAL
Date: 9/3/2020
Worklist: 55854
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1990348
MB concentration:	0.805
M/B 2 Sigma CSU:	0.381
MB MDC:	0.635
MB Numerical Performance Indicator:	4.14
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCSD55854	LCSD55854
Count Date:	9/9/2020	9/9/2020
Spike I.D.:	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):	0.815	0.812
Target Conc. (pCi/L, g, F):	4.718	4.741
Uncertainty (Calculated):	0.231	0.232
Result (pCi/L, g, F):	5.944	5.257
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.289	1.159
Numerical Performance Indicator:	1.83	0.86
Percent Recovery:	125.98%	110.89%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	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 Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCSD55854	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD55854	
Sample Result (pCi/L, g, F):	5.944	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.289	
Sample Duplicate Result (pCi/L, g, F):	5.257	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.159	
Are sample and/or duplicate results below RL?	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, 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:

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

Handwritten signature/initials

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:

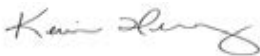
Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise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

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

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

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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
92491914001	PZ-51S					
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	
92491914002	PZ-51I					
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	0.0795 ± 0.170 (0.400) C:94% T:NA	pCi/L	09/04/20 07:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.11 ± 0.491 (0.779) C:66% T:80%	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.19 ± 0.661 (1.18)	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	0.237 ± 0.130 (0.209) C:87% T:NA	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.700 ± 0.436 (0.811) C:69% T:82%	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.937 ± 0.566 (1.02)	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.

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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.

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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**



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 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C Comments: _____

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

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):		

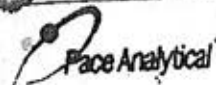
Client Notification/ Resolution: _____ Field Data Required? Y / N

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 Quality Control

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#	Description
	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-)	
	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)	
	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	
	AG0U-100 mL Amber Unpreserved vials (N/A)	
	V5GU-20 mL Sterilization vials (N/A)	

GLN

2

pH Adjustment Log for Preserved Samples

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

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		Billing Information:	
Address: 2480 Maner Road Atlanta, GA 30339		Email To: scs@invoices@southernco.com	
Report To: Joju Abraham		Site Collection Info/Address: Plant Branch	
Copy To: Golder		State: Georgia City: Milledgeville Time Zone Collected:	
Phone: (404) 506-7239 Email: jabraham@southernco.com		PT MT CT X ET	
Project Name: Plant Branch BCD Assessment		Pace Profile#	
Project # CCR		Pace Project Manager: kevin.herring@pacelabs.com	
Purchase Order #		Quote #	
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	
Analysis:			

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 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
 - 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 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

LAB USE ONLY: Lab Sample # / Comments: 62491914	
---	--

(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	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID: 232
Packing Material Used:	Radchem sample(s) screened (<500 cpm): Y N NA	Lab Tracking #:	Cooler 1 Temp Upon Receipt: 20°C Cooler 1 Therm Corr. Factor: 0.0°C Cooler 1 Corrected Temp: 20°C

Relinquished by/Company: (Signature) <i>Joju Abraham</i> / A-mixture/Golder	Date/Time: 8/21/20 1108	Received by/Company: (Signature) <i>Kevin Herring</i> / 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

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

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT
Pace Project No.: 92491917

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

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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
92491917001	PZ-51S					
	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	
92491917002	PZ-51I					
	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.15	Std. Units			1		09/09/20 17:02		
6020 MET ICPMS									
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	
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	08/26/20 12:00	08/27/20 10:14	7439-97-6	
300.0 IC Anions 28 Days									
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			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.57	Std. Units			1		09/09/20 17:02		
6020 MET ICPMS									
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	
7470 Mercury									
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	
300.0 IC Anions 28 Days									
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.	MS Result							MSD 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.

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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	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	0.0024	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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD 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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD 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

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**



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 2.30
2.6
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

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, 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#: 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
 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
 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)

* 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 **
 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
 Cl Strips
 Sample pH Acceptable Y N NA
 pH Strips
 Sulfide Present Y N NA
 Lead Acetate Strips
 LAB USE ONLY:
 Lab Sample # / Comments: 921417

(App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, Li, Mo, Se, Ti
 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°C
 Cooler 1 Corrected Temp: 20°C
 Comments:

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

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:

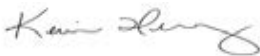
Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where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

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

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

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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
92495649001	BRGWA-12S					
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	
92495649002	BRGWA-12I					
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	
92495649003	BRGWA-23S					
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	
92495649004	BRGWC-25I					
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
92495649005	BRGWC-29I					
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	
92495649006	BRGWC-32S					
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	
92495649007	BRGWC-30I					
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	
92495649008	BRGWC-47					
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
92495649009	BRGWC-45					
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	
92495649010	BRGWC-271					
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	
92495649011	DUP-1					
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	
92495649012	EB-1					
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
92495649013	BRGWC-50					
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	
92495649014	BRGWC-521					
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	
92495649015	FB-2					
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	

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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
Sample: BRGWA-12S Lab ID: 92495649001 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	0.158 ± 0.206 (0.428) C:87% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.201 ± 0.461 (1.02) C:72% T:75%	pCi/L	10/07/20 10:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.359 ± 0.667 (1.45)	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
Sample: BRGWA-12I Lab ID: 92495649002 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	0.407 ± 0.277 (0.441) C:93% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.355 ± 0.459 (0.980) C:70% T:85%	pCi/L	10/07/20 10:50	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.762 ± 0.736 (1.42)	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
Sample: BRGWA-23S Lab ID: 92495649003 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	0.153 ± 0.255 (0.571) C:89% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.884 ± 0.492 (0.904) C:73% T:77%	pCi/L	10/07/20 10:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.04 ± 0.747 (1.48)	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
Sample: BRGWC-25I Lab ID: 92495649004 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	0.205 ± 0.212 (0.404) C:92% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0970 ± 0.479 (1.12) C:73% T:70%	pCi/L	10/07/20 10:50	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.205 ± 0.691 (1.52)	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
Sample: BRGWC-29I Lab ID: 92495649005 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	0.216 ± 0.249 (0.508) C:89% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.01 ± 0.593 (1.12) C:74% T:69%	pCi/L	10/07/20 10:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.23 ± 0.842 (1.63)	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
Sample: BRGWC-32S Lab ID: 92495649006 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	0.104 ± 0.148 (0.303) C:80% T:NA	pCi/L	10/06/20 17:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0907 ± 0.382 (0.868) C:76% T:81%	pCi/L	10/16/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.195 ± 0.530 (1.17)	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
Sample: BRGWC-30I Lab ID: 92495649007 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	0.177 ± 0.167 (0.320) C:84% T:NA	pCi/L	10/06/20 17:29	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.253 ± 0.455 (0.995) C:71% T:77%	pCi/L	10/16/20 14:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.430 ± 0.622 (1.32)	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
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:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.160 ± 0.140 (0.259) C:89% T:NA	pCi/L	10/06/20 17:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.350 ± 0.400 (0.839) C:73% T:79%	pCi/L	10/16/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.510 ± 0.540 (1.10)	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	-0.00362 ± 0.148 (0.341) C:86% T:NA	pCi/L	10/06/20 17:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.254 ± 0.452 (0.989) C:73% T:78%	pCi/L	10/16/20 14:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.254 ± 0.600 (1.33)	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
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:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.175 ± 0.261 (0.563) C:82% T:NA	pCi/L	10/06/20 17:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0837 ± 0.369 (0.878) C:72% T:81%	pCi/L	10/16/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.175 ± 0.630 (1.44)	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	0.184 ± 0.179 (0.346) C:79% T:NA	pCi/L	10/06/20 17:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.119 ± 0.445 (1.00) C:71% T:83%	pCi/L	10/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.303 ± 0.624 (1.35)	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

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
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:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0240 ± 0.137 (0.425) C:87% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.369 ± 0.523 (1.12) C:68% T:77%	pCi/L	10/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.369 ± 0.660 (1.55)	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
Sample: BRGWC-50 Lab ID: 92495649013 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	0.469 ± 0.288 (0.425) C:92% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.248 ± 0.403 (0.875) C:68% T:76%	pCi/L	10/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.717 ± 0.691 (1.30)	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
Sample: BRGWC-52I Lab ID: 92495649014 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	0.895 ± 0.390 (0.442) C:89% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.14 ± 0.493 (0.792) C:72% T:79%	pCi/L	10/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.04 ± 0.883 (1.23)	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
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:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.155 ± 0.224 (0.482) C:86% T:NA	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0257 ± 0.323 (0.759) C:74% T:87%	pCi/L	10/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.155 ± 0.547 (1.24)	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	

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:	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

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

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)	BP8A-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 #: Accnum: 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	
M/B Counting Uncertainty:	0.159	
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
	LCS56393	LCS56393
Count Date:	10/7/2020	
Spike I.D.:	19-033	
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):	4.553	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.770	
Numerical Performance Indicator:	-0.53	
Percent Recovery:	95.58%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment		
Sample I.D.:	92495649004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92495649004DUP	
Sample Result (pCi/L, g, F):	0.205	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.210	
Sample Duplicate Result (pCi/L, g, F):	0.239	
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:	-0.193	92495649004
Duplicate RPD:	15.40%	92495649004DUP
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. (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:		

LAM 10/7/2020

On 10.7.20



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	
M/B Counting Uncertainty:	0.159	
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)?	
	LCS56393	LCS56393
Count Date:	10/7/2020	10/7/2020
Spike I.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):	0.505	0.510
Target Conc. (pCi/L, g, F):	4.763	4.718
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.553	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 Limits:	125%	125%
Lower % Recovery Limits:	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.:	LCS56393	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD56393	
Sample Result (pCi/L, g, F):	4.553	
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 RL?	NO	
Duplicate Numerical Performance Indicator:	-0.071	92495649004
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.83%	92495649004DUP
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:

LAM 10/7/2020

Du (0.7-20)



Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: VAL
Date: 10/14/2020
Worklist: 56680
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2021120
MB concentration:	0.335
M/B 2 Sigma CSU:	0.463
MB MDC:	0.993
MB Numerical Performance Indicator:	1.42
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCS56680	LCSD56680
Count Date:	10/16/2020	10/16/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.004	38.004
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.814	0.821
Target Conc. (pCi/L, g, F):	4.668	4.627
Uncertainty (Calculated):	0.229	0.227
Result (pCi/L, g, F):	3.950	4.745
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.924	1.105
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 Limits:	135%	135%
Lower % Recovery Limits:	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 Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS56680	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD56680	
Sample Result (pCi/L, g, F):	3.950	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.924	
Sample Duplicate Result (pCi/L, g, F):	4.745	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.105	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.082	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	19.14%	
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, 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:

10/19/20

10/19/2020



Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: VAL
Date: 10/5/2020
Worklist: 56396
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	2009758	
MB concentration:	0.318	
M/B 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	LCSD (Y or N)?	
	LCS56396	LCSD56396
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 (L, g, F):	0.811	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	3.363
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.942	0.842
Numerical Performance Indicator:	-1.79	-3.04
Percent Recovery:	81.20%	71.31%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	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 Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS56396	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD56396	
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):	3.363	
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:	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:

ONE
10/18/2020

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:

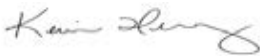
Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where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

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

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

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

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
92495653010	BRGWC-27I	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
92495653011	DUP-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
92495653012	EB-1	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
92495653013	BRGWC-50	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
92495653015	FB-2	SM 2450C-2011	ALW	1
		EPA 6020B	CW1	13
		EPA 6010D	DRB	1
		EPA 7470A	FFP	1

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
		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

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					
92495653001	BRGWA-12S					
	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	
92495653002	BRGWA-12I					
	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	
92495653003	BRGWA-23S					
	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	
92495653004	BRGWC-25I					
	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	
92495653005	BRGWC-29I					
	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					
92495653005	BRGWC-29I					
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	
92495653006	BRGWC-32S					
	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	
92495653007	BRGWC-30I					
	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
92495653008	BRGWC-47					
	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					
92495653008	BRGWC-47					
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	
92495653009	BRGWC-45					
	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	
92495653010	BRGWC-27I					
	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	
92495653011	DUP-1					
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	
92495653012	EB-1					
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
92495653013	BRGWC-50					
	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	
92495653014	BRGWC-52I					
	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	
92495653015	FB-2					
EPA 6020B	Boron	0.0097J	mg/L	0.10	09/24/20 14:14	

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.00	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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	

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.01	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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: BRGWA-23S		Lab ID: 92495653003		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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.72	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	10.7	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:25	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00033J	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	0.086	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	0.033J	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	0.0019J	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 16:06	7440-47-3	
Cobalt	0.00076J	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	0.011J	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	0.0028J	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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	109	mg/L	10.0	10.0	1		09/16/20 14:23		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.1	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	41.5	mg/L	1.0	0.50	1		09/23/20 23:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.00	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.53	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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: BRGWC-32S		Lab ID: 92495653006		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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.79	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	43.1	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 20:40	7440-70-2	M1
6020 MET ICPMS									
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	0.024	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	1.4	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	0.0025J	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	0.0022J	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	0.12	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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	428	mg/L	10.0	10.0	1		09/17/20 15:20		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.6	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	255	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.29	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.76	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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: BRGWC-45		Lab ID: 92495653009		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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.27	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	39.7	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:06	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0012J	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	0.085	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	0.028J	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	0.0014J	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:19	7440-47-3	
Cobalt	0.0049J	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:19	7440-48-4	
Lead	0.000053J	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:19	7439-92-1	
Lithium	0.0036J	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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	275	mg/L	10.0	10.0	1		09/17/20 15:20		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	54.9	mg/L	1.0	0.60	1		09/19/20 16:53	16887-00-6	
Fluoride	0.052J	mg/L	0.10	0.050	1		09/19/20 16:53	16984-48-8	
Sulfate	103	mg/L	2.0	1.0	2		09/20/20 04:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.81	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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	

REPORT OF LABORATORY ANALYSIS

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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					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	108	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:23	7440-70-2		
6020 MET ICPMS		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	0.022	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	1.7	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	0.00065J	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	0.016J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:31	7439-93-2		
Molybdenum	0.00076J	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		
7470 Mercury		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		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	622	mg/L	10.0	10.0	1		09/18/20 09:58			
300.0 IC Anions 28 Days		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 17:23	16887-00-6		
Fluoride	0.13	mg/L	0.10	0.050	1		09/19/20 17:23	16984-48-8		
Sulfate	343	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					
6010D ATL ICP		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		
6020 MET ICPMS		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	0.0066J	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		
7470 Mercury		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		
2540C Total Dissolved Solids		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			
300.0 IC Anions 28 Days		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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.41	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.12	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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					
6010D ATL ICP		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		
6020 MET ICPMS		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	0.0097J	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		
7470 Mercury		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		
2540C Total Dissolved Solids		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			
300.0 IC Anions 28 Days		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		

REPORT OF LABORATORY ANALYSIS

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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
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	5.7	1	1	6.6	6.6	89	87	75-125	0	20

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REPORT OF LABORATORY ANALYSIS

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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	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		92495653006	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
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	92495653001 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	0.097	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	3011606		3011607		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
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	ND	0.0025	0.0025	0.0024	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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REPORT OF LABORATORY ANALYSIS

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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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495047013	Result	Spike Conc.	Spike Conc.								
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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495870010	Result	Spike Conc.	Spike Conc.								
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.	Spike Conc.	Result	Result						
Chloride	mg/L	364	50	50	50	389	389	249	249	90-110	0	10	
Fluoride	mg/L	0.60	2.5	2.5	2.5	3.3	3.4	110	110	90-110	1	10	
Sulfate	mg/L	3.0	50	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.	Spike Conc.	Result	Result						
Chloride	mg/L	109	50	50	50	158	158	97	97	90-110	0	10	
Fluoride	mg/L	0.43	2.5	2.5	2.5	3.1	3.2	108	109	90-110	1	10	
Sulfate	mg/L	79.4	50	50	50	120	120	81	81	90-110	0	10 M1	

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QUALIFIERS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

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

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
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 Other
Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Prof. Name: _____

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 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):		

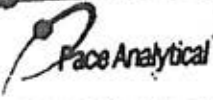
Client Notification/ Resolution: _____ Field Data Required? Y / N

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#: 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		Billing Information:	
Address: 2480 Maner Road Atlanta, GA 30339			
Report To: Jody Abraham		Email To: scsvoices@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: Collect-d	
Phone: (404) 506-7239 Email: j.abraham@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: <input type="checkbox"/> Same Day <input type="checkbox"/> Next Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 4 Day <input type="checkbox"/> 5 Day (Expedite Charges Apply)		Field Filtered (if applicable): <input type="checkbox"/> Yes <input type="checkbox"/> No	

* 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 **				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 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					
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					

(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:	
Packing Material Used:		Radchem sample(s) screened (<500 cpm): Y N NA		Lab Tracking #:		Temp Blank Received Y N NA	
Relinquished by/Company: (Signature)		Date/Time: 9-16-2020/0800		Received by/Company: (Signature)		Therm ID#	
Relinquished by/Company: (Signature)		Date/Time:		Received by/Company: (Signature)		Cooler 1 Temp Upon Receipt: °C	
Relinquished by/Company: (Signature)		Date/Time:		Received by/Company: (Signature)		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	

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:

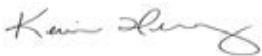
Enclosed are the analytical results for sample(s) received by the laboratory on September 16, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise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

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

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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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

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
92495654001	BRGWA-6S					
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	
92495654002	BRGWA-5S					
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	
92495654003	BRGWA-5I					
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	
92495654004	BRGWA-2S					
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
92495654005	BRGWA-2I					
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
Sample: BRGWA-6S Lab ID: 92495654001 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	0.00810 ± 0.162 (0.444) C:88% T:NA	pCi/L	09/30/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.466 ± 0.418 (0.851) C:71% T:86%	pCi/L	10/05/20 15:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.474 ± 0.580 (1.30)	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-5S **Lab ID: 92495654002** Collected: 09/15/20 13:20 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	0.0906 ± 0.218 (0.520) C:87% T:NA	pCi/L	09/30/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.459 ± 0.553 (1.17) C:71% T:84%	pCi/L	10/05/20 17:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.550 ± 0.771 (1.69)	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
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:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0999 ± 0.226 (0.535) C:87% T:NA	pCi/L	09/30/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.115 ± 0.622 (1.42) C:66% T:76%	pCi/L	10/05/20 17:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.215 ± 0.848 (1.96)	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
Sample: BRGWA-2S Lab ID: 92495654004 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	0.109 ± 0.177 (0.389) C:91% T:NA	pCi/L	09/30/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.470 ± 0.606 (1.29) C:63% T:77%	pCi/L	10/05/20 17:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.579 ± 0.783 (1.68)	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
Sample: BRGWA-2I Lab ID: 92495654005 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	-0.0263 ± 0.159 (0.461) C:94% T:NA	pCi/L	09/30/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0583 ± 0.776 (1.80) C:44% T:84%	pCi/L	10/05/20 17:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0583 ± 0.935 (2.26)	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

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

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

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.: 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



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

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 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 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):		

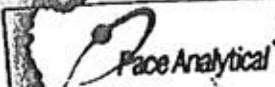
Client Notification/ Resolution: _____ Field Data Required? Y / N

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

PH: 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 #	
Collected By (signature):		Face Project Manager: kevin.berring@pacelab.com Immediately Packed on Ice: [X] Yes [] No	
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	

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 Ctrs
			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:
Relinquished by/Company: (Signature) 	Packing Material Used:	Lab Tracking #:	
Date/Time: 9-16-2020/0800	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) 	Date/Time: 9/16/20 0945	MTJL LAB USE ONLY Table #: Acctnum: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature)	Received by/Company: (Signature)	Date/Time:	Trip Blank Received: Y N NA HCL MeOH TSP Other
			Non Conformance(s): YES / NO



Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: LAL
Date: 9/29/2020
Worklist: 56344
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	2008968	
MB concentration:	0.094	
M/B Counting Uncertainty:	0.180	
MB MDC:	0.415	
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:	9/30/2020	9/30/2020
Spike I.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):	0.509	0.505
Target Conc. (pCi/L, g, F):	4.723	4.761
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	3.880	3.912
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.699	0.693
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 Limits:	125%	125%
Lower % Recovery Limits:	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.:	LCSD56344	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD56344	
Sample Result (pCi/L, g, F):	3.880	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.699	
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:	-0.065	92495960001
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	0.04%	92495960001DUP
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:

Mu 10/1/2020

UAM 10/1/2020



Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: LAL
Date: 9/29/2020
Worklist: 56344
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID		2008968
MB concentration:		0.094
M/B Counting Uncertainty:		0.180
MB MDC:		0.415
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)?	N
	LCSD56344	LCSD56344
Count Date:	9/30/2020	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.509	
Target Conc. (pCi/L, g, F):	4.723	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	3.880	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.699	
Numerical Performance Indicator:	-2.36	
Percent Recovery:	82.15%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	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.:	92495960001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92495960001DUP	
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):	0.152	
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%	92495960001DUP
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.~~ N/A

UAM 10/1/2020

UAM 10/1/2020

UAM 10/1/2020



Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: VAL
Date: 9/29/2020
Worklist: 56345
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	2008969	
MB concentration:	0.804	
M/B 2 Sigma CSU:	0.467	
MB MDC:	0.852	
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)?	
	LCSD56345	LCSD56345
Count Date:	10/5/2020	10/5/2020
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 (L, g, F):	0.819	0.806
Target Conc. (pCi/L, g, F):	4.659	4.732
Uncertainty (Calculated):	0.228	0.232
Result (pCi/L, g, F):	4.491	4.137
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.317	1.305
Numerical Performance Indicator:	-0.25	-0.88
Percent Recovery:	96.38%	87.43%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	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 Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCSD56345	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Duplicate Sample I.D.:	LCSD56345	
Sample Result (pCi/L, g, F):	4.491	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.317	
Sample Duplicate Result (pCi/L, g, F):	4.137	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.305	
Are sample and/or duplicate results below RL?	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:	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-prepared.

10/6-20
VAL

10/16/2020

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

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

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

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

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					
92495656001	BRGWA-6S					
	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	
92495656002	BRGWA-5S					
	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	
92495656003	BRGWA-5I					
	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	
92495656004	BRGWA-2S					
	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	
92495656005	BRGWA-2I					
	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.43	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.25	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.7	mg/L	1.0	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	

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.27	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.7	mg/L	1.0	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	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.01	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.64	Std. Units			1		09/22/20 12:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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
		92495656001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	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	

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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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496730002	Result	Spike Conc.	Spike Conc.								
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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496730004	Result	Spike Conc.	Spike Conc.								
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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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

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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 2.14 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

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):		

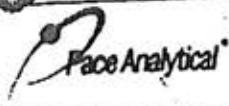
Client Notification/ Resolution: _____ Field Data Required? Y / N

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-)	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/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 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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 Cl 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 (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-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

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
 Account: _____
 Template: _____
 Prelogin: _____
 PM: _____
 PB: _____

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

October 01, 2020

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

RE: Project: BRANCH E NETWORK
Pace Project No.: 92495964

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 17, 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,



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 E NETWORK

Pace Project No.: 92495964

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

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495964001	BRGWC-35S	Water	09/16/20 09:05	09/17/20 10:00
92495964002	BRGWC-34S	Water	09/16/20 09:59	09/17/20 10:00
92495964003	BRGWC-33S	Water	09/16/20 11:02	09/17/20 10:00
92495964004	BRGWC-17S	Water	09/16/20 12:30	09/17/20 10:00
92495964005	BRGWC-36S	Water	09/16/20 15:21	09/17/20 10:00
92495964006	BRGWC-37S	Water	09/16/20 16:09	09/17/20 10:00
92495964007	FB-1	Water	09/16/20 10:10	09/17/20 10:00
92495964008	DUP-2	Water	09/16/20 00:00	09/17/20 10:00
92495964009	BRGWC-38S	Water	09/17/20 11:26	09/18/20 10:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92495964001	BRGWC-35S	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
92495964002	BRGWC-34S	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
92495964003	BRGWC-33S	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
92495964004	BRGWC-17S	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
92495964005	BRGWC-36S	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
92495964006	BRGWC-37S	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
92495964007	FB-1	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
92495964008	DUP-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	13

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495964009	BRGWC-38S	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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495964001	BRGWC-35S					
	pH	5.96	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	61.8	mg/L	1.0	09/22/20 21:32	
EPA 6020B	Barium	0.033	mg/L	0.010	09/22/20 17:42	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	09/22/20 17:42	
EPA 6020B	Boron	1.9	mg/L	0.10	09/22/20 17:42	
EPA 6020B	Chromium	0.0058J	mg/L	0.010	09/22/20 17:42	
EPA 6020B	Lead	0.00012J	mg/L	0.0050	09/22/20 17:42	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	09/22/20 17:42	
SM 2450C-2011	Total Dissolved Solids	474	mg/L	10.0	09/18/20 09:58	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	09/19/20 18:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	09/19/20 18:22	
EPA 300.0 Rev 2.1 1993	Sulfate	270	mg/L	6.0	09/20/20 04:47	
92495964002	BRGWC-34S					
	pH	5.81	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	77.7	mg/L	1.0	09/22/20 21:37	
EPA 6020B	Barium	0.023	mg/L	0.010	09/22/20 17:48	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	09/22/20 17:48	
EPA 6020B	Boron	2.2	mg/L	0.10	09/22/20 17:48	
EPA 6020B	Cadmium	0.00017J	mg/L	0.0025	09/22/20 17:48	
EPA 6020B	Cobalt	0.0042J	mg/L	0.0050	09/22/20 17:48	
SM 2450C-2011	Total Dissolved Solids	392	mg/L	10.0	09/18/20 09:58	
EPA 300.0 Rev 2.1 1993	Chloride	6.6	mg/L	1.0	09/19/20 18:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	09/19/20 18:37	
EPA 300.0 Rev 2.1 1993	Sulfate	283	mg/L	6.0	09/20/20 05:01	
92495964003	BRGWC-33S					
	pH	4.78	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	37.9	mg/L	1.0	09/22/20 21:41	
EPA 6020B	Barium	0.019	mg/L	0.010	09/22/20 17:53	
EPA 6020B	Beryllium	0.0015J	mg/L	0.0030	09/22/20 17:53	
EPA 6020B	Boron	1.1	mg/L	0.10	09/22/20 17:53	
EPA 6020B	Cadmium	0.00032J	mg/L	0.0025	09/22/20 17:53	
EPA 6020B	Cobalt	0.034	mg/L	0.0050	09/22/20 17:53	
EPA 6020B	Lead	0.000063J	mg/L	0.0050	09/22/20 17:53	
EPA 6020B	Lithium	0.0089J	mg/L	0.030	09/22/20 17:53	
EPA 6020B	Selenium	0.0028J	mg/L	0.010	09/22/20 17:53	
EPA 6020B	Thallium	0.00018J	mg/L	0.0010	09/22/20 17:53	
SM 2450C-2011	Total Dissolved Solids	88.0	mg/L	10.0	09/18/20 09:59	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	09/19/20 18:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.085J	mg/L	0.10	09/19/20 18:52	
EPA 300.0 Rev 2.1 1993	Sulfate	154	mg/L	3.0	09/20/20 05:16	
92495964004	BRGWC-17S					
	pH	6.26	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	37.9	mg/L	1.0	09/22/20 21:45	
EPA 6020B	Barium	0.044	mg/L	0.010	09/22/20 18:11	
EPA 6020B	Boron	0.0066J	mg/L	0.10	09/22/20 18:11	
EPA 6020B	Chromium	0.012	mg/L	0.010	09/22/20 18:11	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495964004	BRGWC-17S					
EPA 6020B	Lead	0.000054J	mg/L	0.0050	09/22/20 18:11	
EPA 6020B	Lithium	0.00096J	mg/L	0.030	09/22/20 18:11	
SM 2450C-2011	Total Dissolved Solids	316	mg/L	10.0	09/18/20 09:59	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	09/19/20 19:07	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	09/19/20 19:07	
EPA 300.0 Rev 2.1 1993	Sulfate	151	mg/L	3.0	09/20/20 05:30	
92495964005	BRGWC-36S					
	pH	5.58	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	45.9	mg/L	1.0	09/22/20 21:50	
EPA 6020B	Barium	0.030	mg/L	0.010	09/22/20 18:16	
EPA 6020B	Beryllium	0.000080J	mg/L	0.0030	09/22/20 18:16	
EPA 6020B	Boron	0.99	mg/L	0.10	09/22/20 18:16	
EPA 6020B	Chromium	0.0064J	mg/L	0.010	09/22/20 18:16	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	09/22/20 18:16	
EPA 6020B	Selenium	0.0031J	mg/L	0.010	09/22/20 18:16	
SM 2450C-2011	Total Dissolved Solids	463	mg/L	10.0	09/18/20 09:59	
EPA 300.0 Rev 2.1 1993	Chloride	7.9	mg/L	1.0	09/19/20 19:22	
EPA 300.0 Rev 2.1 1993	Sulfate	256	mg/L	5.0	09/20/20 06:15	M6
92495964006	BRGWC-37S					
	pH	5.84	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	3.2	mg/L	1.0	09/22/20 21:54	
EPA 6020B	Barium	0.024	mg/L	0.010	09/22/20 18:22	
EPA 6020B	Boron	0.0062J	mg/L	0.10	09/22/20 18:22	
EPA 6020B	Chromium	0.0018J	mg/L	0.010	09/22/20 18:22	
SM 2450C-2011	Total Dissolved Solids	31.0	mg/L	10.0	09/18/20 09:59	
EPA 300.0 Rev 2.1 1993	Chloride	1.8	mg/L	1.0	09/19/20 20:07	
92495964008	DUP-2					
EPA 6010D	Calcium	47.6	mg/L	1.0	09/25/20 19:00	
EPA 6020B	Barium	0.030	mg/L	0.010	09/22/20 18:34	
EPA 6020B	Beryllium	0.000085J	mg/L	0.0030	09/22/20 18:34	
EPA 6020B	Boron	1.0	mg/L	0.10	09/22/20 18:34	
EPA 6020B	Chromium	0.0067J	mg/L	0.010	09/22/20 18:34	
EPA 6020B	Lithium	0.0023J	mg/L	0.030	09/22/20 18:34	
EPA 6020B	Selenium	0.0040J	mg/L	0.010	09/22/20 18:34	
SM 2450C-2011	Total Dissolved Solids	462	mg/L	10.0	09/18/20 09:59	
EPA 300.0 Rev 2.1 1993	Chloride	7.9	mg/L	1.0	09/19/20 20:36	
EPA 300.0 Rev 2.1 1993	Sulfate	251	mg/L	5.0	09/20/20 06:59	
92495964009	BRGWC-38S					
	pH	4.17	Std. Units		09/29/20 12:27	
EPA 6010D	Calcium	33.1	mg/L	1.0	09/25/20 19:26	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	09/22/20 20:22	
EPA 6020B	Barium	0.014	mg/L	0.010	09/22/20 20:22	
EPA 6020B	Beryllium	0.0073	mg/L	0.0030	09/22/20 20:22	
EPA 6020B	Boron	1.4	mg/L	0.10	09/22/20 20:22	
EPA 6020B	Cadmium	0.00050J	mg/L	0.0025	09/22/20 20:22	

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SUMMARY OF DETECTION

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495964009	BRGWC-38S					
EPA 6020B	Chromium	0.0042J	mg/L	0.010	09/22/20 20:22	
EPA 6020B	Cobalt	0.20	mg/L	0.0050	09/22/20 20:22	
EPA 6020B	Lead	0.00032J	mg/L	0.0050	09/22/20 20:22	
EPA 6020B	Lithium	0.020J	mg/L	0.030	09/22/20 20:22	
EPA 6020B	Selenium	0.029	mg/L	0.010	09/22/20 20:22	
EPA 6020B	Thallium	0.00017J	mg/L	0.0010	09/22/20 20:22	
EPA 7470A	Mercury	0.00011J	mg/L	0.00050	09/23/20 10:43	
SM 2450C-2011	Total Dissolved Solids	587	mg/L	10.0	09/21/20 16:29	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	09/22/20 12:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.68	mg/L	0.10	09/22/20 12:31	
EPA 300.0 Rev 2.1 1993	Sulfate	356	mg/L	7.0	09/22/20 18:55	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: BRGWC-35S		Lab ID: 92495964001		Collected: 09/16/20 09:05		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.96	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	61.8	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:32	7440-70-2	
6020 MET ICPMS									
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 17:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:42	7440-38-2	
Barium	0.033	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:42	7440-39-3	
Beryllium	0.00014J	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:42	7440-41-7	
Boron	1.9	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:42	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:42	7440-43-9	
Chromium	0.0058J	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:42	7440-48-4	
Lead	0.00012J	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:42	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:42	7440-28-0	
7470 Mercury									
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 14:52	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	474	mg/L	10.0	10.0	1		09/18/20 09:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.0	mg/L	1.0	0.60	1		09/19/20 18:22	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		09/19/20 18:22	16984-48-8	
Sulfate	270	mg/L	6.0	3.0	6		09/20/20 04:47	14808-79-8	

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: BRGWC-34S		Lab ID: 92495964002		Collected: 09/16/20 09:59		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.81	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	77.7	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:37	7440-70-2	
6020 MET ICPMS									
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 17:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:48	7440-38-2	
Barium	0.023	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:48	7440-39-3	
Beryllium	0.00014J	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:48	7440-41-7	
Boron	2.2	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:48	7440-42-8	
Cadmium	0.00017J	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:48	7440-47-3	
Cobalt	0.0042J	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:48	7440-28-0	
7470 Mercury									
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 14:54	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	392	mg/L	10.0	10.0	1		09/18/20 09:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.6	mg/L	1.0	0.60	1		09/19/20 18:37	16887-00-6	
Fluoride	0.077J	mg/L	0.10	0.050	1		09/19/20 18:37	16984-48-8	
Sulfate	283	mg/L	6.0	3.0	6		09/20/20 05:01	14808-79-8	

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: BRGWC-33S		Lab ID: 92495964003		Collected: 09/16/20 11:02		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.78	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	37.9	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:41	7440-70-2	
6020 MET ICPMS									
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 17:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:53	7440-38-2	
Barium	0.019	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:53	7440-39-3	
Beryllium	0.0015J	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:53	7440-41-7	
Boron	1.1	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:53	7440-42-8	
Cadmium	0.00032J	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:53	7440-47-3	
Cobalt	0.034	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:53	7440-48-4	
Lead	0.000063J	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:53	7439-92-1	
Lithium	0.0089J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:53	7439-98-7	
Selenium	0.0028J	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:53	7782-49-2	
Thallium	0.00018J	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:53	7440-28-0	
7470 Mercury									
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 14:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	88.0	mg/L	10.0	10.0	1		09/18/20 09:59		
300.0 IC Anions 28 Days									
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 18:52	16887-00-6	
Fluoride	0.085J	mg/L	0.10	0.050	1		09/19/20 18:52	16984-48-8	
Sulfate	154	mg/L	3.0	1.5	3		09/20/20 05:16	14808-79-8	

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK
Pace Project No.: 92495964

Sample: BRGWC-17S		Lab ID: 92495964004		Collected: 09/16/20 12:30		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.26	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	37.9	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:45	7440-70-2	
6020 MET ICPMS									
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 18:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 18:11	7440-38-2	
Barium	0.044	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 18:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 18:11	7440-41-7	
Boron	0.0066J	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 18:11	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 18:11	7440-43-9	
Chromium	0.012	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 18:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 18:11	7440-48-4	
Lead	0.000054J	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 18:11	7439-92-1	
Lithium	0.00096J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 18:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 18:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 18:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 18:11	7440-28-0	
7470 Mercury									
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 14:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	316	mg/L	10.0	10.0	1		09/18/20 09:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.2	mg/L	1.0	0.60	1		09/19/20 19:07	16887-00-6	
Fluoride	0.10	mg/L	0.10	0.050	1		09/19/20 19:07	16984-48-8	
Sulfate	151	mg/L	3.0	1.5	3		09/20/20 05:30	14808-79-8	

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK
Pace Project No.: 92495964

Sample: BRGWC-36S		Lab ID: 92495964005		Collected: 09/16/20 15:21		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.58	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	45.9	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:50	7440-70-2	
6020 MET ICPMS									
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 18:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 18:16	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 18:16	7440-39-3	
Beryllium	0.000080J	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 18:16	7440-41-7	
Boron	0.99	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 18:16	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 18:16	7440-43-9	
Chromium	0.0064J	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 18:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 18:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 18:16	7439-92-1	
Lithium	0.0022J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 18:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 18:16	7439-98-7	
Selenium	0.0031J	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 18:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 18:16	7440-28-0	
7470 Mercury									
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 15:01	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	463	mg/L	10.0	10.0	1		09/18/20 09:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	7.9	mg/L	1.0	0.60	1		09/19/20 19:22	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 19:22	16984-48-8	
Sulfate	256	mg/L	5.0	2.5	5		09/20/20 06:15	14808-79-8	M6

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: BRGWC-37S		Lab ID: 92495964006		Collected: 09/16/20 16:09		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.84	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	3.2	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:54	7440-70-2	
6020 MET ICPMS									
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 18:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 18:22	7440-38-2	
Barium	0.024	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 18:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 18:22	7440-41-7	
Boron	0.0062J	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 18:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 18:22	7440-43-9	
Chromium	0.0018J	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 18:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 18:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 18:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 18:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 18:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 18:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 18:22	7440-28-0	
7470 Mercury									
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 15:03	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	31.0	mg/L	10.0	10.0	1		09/18/20 09:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.8	mg/L	1.0	0.60	1		09/19/20 20:07	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 20:07	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/19/20 20:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: FB-1		Lab ID: 92495964007		Collected: 09/16/20 10:10	Received: 09/17/20 10:00	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		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 21:58	7440-70-2		
6020 MET ICPMS		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 18:28	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 18:28	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 18:28	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 18:28	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 18:28	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 18:28	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 18:28	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 18:28	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 18:28	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 18:28	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 18:28	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 18:28	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 18:28	7440-28-0		
7470 Mercury		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 15:06	7439-97-6		
2540C Total Dissolved Solids		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 09:59			
300.0 IC Anions 28 Days		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 20:21	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 20:21	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/19/20 20:21	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: DUP-2		Lab ID: 92495964008		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					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	47.6	mg/L	1.0	0.070	1	09/24/20 14:17	09/25/20 19:00	7440-70-2		
6020 MET ICPMS		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 18:34	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 18:34	7440-38-2		
Barium	0.030	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 18:34	7440-39-3		
Beryllium	0.00085J	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 18:34	7440-41-7		
Boron	1.0	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 18:34	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 18:34	7440-43-9		
Chromium	0.0067J	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 18:34	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 18:34	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 18:34	7439-92-1		
Lithium	0.0023J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 18:34	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 18:34	7439-98-7		
Selenium	0.0040J	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 18:34	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 18:34	7440-28-0		
7470 Mercury		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 15:08	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	462	mg/L	10.0	10.0	1		09/18/20 09:59			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	7.9	mg/L	1.0	0.60	1		09/19/20 20:36	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 20:36	16984-48-8		
Sulfate	251	mg/L	5.0	2.5	5		09/20/20 06:59	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Sample: BRGWC-38S		Lab ID: 92495964009		Collected: 09/17/20 11:26		Received: 09/18/20 10:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.17	Std. Units			1		09/29/20 12:27		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	33.1	mg/L	1.0	0.070	1	09/24/20 14:17	09/25/20 19:26	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/21/20 14:30	09/22/20 20:22	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00078	1	09/21/20 14:30	09/22/20 20:22	7440-38-2	
Barium	0.014	mg/L	0.010	0.00071	1	09/21/20 14:30	09/22/20 20:22	7440-39-3	
Beryllium	0.0073	mg/L	0.0030	0.000046	1	09/21/20 14:30	09/22/20 20:22	7440-41-7	
Boron	1.4	mg/L	0.10	0.0052	1	09/21/20 14:30	09/22/20 20:22	7440-42-8	
Cadmium	0.00050J	mg/L	0.0025	0.00012	1	09/21/20 14:30	09/22/20 20:22	7440-43-9	
Chromium	0.0042J	mg/L	0.010	0.00055	1	09/21/20 14:30	09/22/20 20:22	7440-47-3	
Cobalt	0.20	mg/L	0.0050	0.00038	1	09/21/20 14:30	09/22/20 20:22	7440-48-4	
Lead	0.00032J	mg/L	0.0050	0.000036	1	09/21/20 14:30	09/22/20 20:22	7439-92-1	
Lithium	0.020J	mg/L	0.030	0.00081	1	09/21/20 14:30	09/22/20 20:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/21/20 14:30	09/22/20 20:22	7439-98-7	
Selenium	0.029	mg/L	0.010	0.0016	1	09/21/20 14:30	09/22/20 20:22	7782-49-2	
Thallium	0.00017J	mg/L	0.0010	0.00014	1	09/21/20 14:30	09/22/20 20:22	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00011J	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 10:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	587	mg/L	10.0	10.0	1		09/21/20 16:29		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.1	mg/L	1.0	0.60	1		09/22/20 12:31	16887-00-6	
Fluoride	0.68	mg/L	0.10	0.050	1		09/22/20 12:31	16984-48-8	
Sulfate	356	mg/L	7.0	3.5	7		09/22/20 18:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK

Pace Project No.: 92495964

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: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007

METHOD BLANK: 3010230 Matrix: Water
Associated Lab Samples: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007

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	3010232		3010233		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	43.1	1	44.0	43.4	83	22	75-125	1	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK

Pace Project No.: 92495964

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: 92495964008, 92495964009

METHOD BLANK: 3013294 Matrix: Water

Associated Lab Samples: 92495964008, 92495964009

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
		92495904004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	75.8	1	1	74.9	75.7	-84	-9	75-125	1	20 M1

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK
Pace Project No.: 92495964

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: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008

METHOD BLANK: 3006748 Matrix: Water
Associated Lab Samples: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008

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	92495870002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	106	75-125	2	20	

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Parameter	Units	3006750		3006751		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92495870002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Arsenic	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	
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 E NETWORK

Pace Project No.: 92495964

QC Batch: 567743

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495964009

METHOD BLANK: 3008588

Matrix: Water

Associated Lab Samples: 92495964009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/22/20 17:54	
Arsenic	mg/L	ND	0.0050	0.00078	09/22/20 17:54	
Barium	mg/L	ND	0.010	0.00071	09/22/20 17:54	
Beryllium	mg/L	ND	0.0030	0.000046	09/22/20 17:54	
Boron	mg/L	ND	0.10	0.0052	09/22/20 17:54	
Cadmium	mg/L	ND	0.0025	0.00012	09/22/20 17:54	
Chromium	mg/L	ND	0.010	0.00055	09/22/20 17:54	
Cobalt	mg/L	ND	0.0050	0.00038	09/22/20 17:54	
Lead	mg/L	ND	0.0050	0.000036	09/22/20 17:54	
Lithium	mg/L	ND	0.030	0.00081	09/22/20 17:54	
Molybdenum	mg/L	ND	0.010	0.00069	09/22/20 17:54	
Selenium	mg/L	ND	0.010	0.0016	09/22/20 17:54	
Thallium	mg/L	ND	0.0010	0.00014	09/22/20 17:54	

LABORATORY CONTROL SAMPLE: 3008589

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	0.093	93	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.092	92	80-120	
Boron	mg/L	1	0.96	96	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.093	93	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.092	92	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008590

3008591

Parameter	Units	92496275001 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	0.10	101	105	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.10	96	98	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Parameter	Units	3008590		3008591		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496275001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	57.5 ug/L	0.1	0.1	0.15	0.16	94	101	75-125	4	20		
Beryllium	mg/L	ND	0.1	0.1	0.087	0.092	87	92	75-125	6	20		
Boron	mg/L	244 ug/L	1	1	1.1	1.2	89	98	75-125	8	20		
Cadmium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.11	102	104	75-125	2	20		
Cobalt	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.092	0.093	92	93	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.094	0.097	89	92	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	99	104	75-125	5	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.091	0.093	91	93	75-125	2	20		

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK

Pace Project No.: 92495964

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: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008

METHOD BLANK: 3006615

Matrix: Water

Associated Lab Samples: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008

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	3006617		3006618		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0026	100	103	75-125	3	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK
Pace Project No.: 92495964

QC Batch: 568007 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92495964009

METHOD BLANK: 3009608 Matrix: Water
Associated Lab Samples: 92495964009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/23/20 09:49	

LABORATORY CONTROL SAMPLE: 3009609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009610 3009611

Parameter	Units	3009610		3009611		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92496278002 ND	0.0025	0.0025	0.0024	0.0025	95	99	75-125	4	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK

Pace Project No.: 92495964

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:	92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008		

METHOD BLANK:	3006601	Matrix:	Water
Associated Lab Samples:	92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008		

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 E NETWORK
Pace Project No.: 92495964

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: 92495964009

METHOD BLANK: 3009251 Matrix: Water
Associated Lab Samples: 92495964009

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 E NETWORK
Pace Project No.: 92495964

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: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008

METHOD BLANK: 3008004 Matrix: Water
Associated Lab Samples: 92495964001, 92495964002, 92495964003, 92495964004, 92495964005, 92495964006, 92495964007, 92495964008

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	92495653007		3008007		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
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	92495964005		3008009		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
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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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRANCH E NETWORK
Pace Project No.: 92495964

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: 92495964009

METHOD BLANK: 3009484 Matrix: Water
Associated Lab Samples: 92495964009

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 E NETWORK

Pace Project No.: 92495964

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 E NETWORK
Pace Project No.: 92495964

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495964001	BRGWC-35S				
92495964002	BRGWC-34S				
92495964003	BRGWC-33S				
92495964004	BRGWC-17S				
92495964005	BRGWC-36S				
92495964006	BRGWC-37S				
92495964009	BRGWC-38S				
92495964001	BRGWC-35S	EPA 3010A	568100	EPA 6010D	568125
92495964002	BRGWC-34S	EPA 3010A	568100	EPA 6010D	568125
92495964003	BRGWC-33S	EPA 3010A	568100	EPA 6010D	568125
92495964004	BRGWC-17S	EPA 3010A	568100	EPA 6010D	568125
92495964005	BRGWC-36S	EPA 3010A	568100	EPA 6010D	568125
92495964006	BRGWC-37S	EPA 3010A	568100	EPA 6010D	568125
92495964007	FB-1	EPA 3010A	568100	EPA 6010D	568125
92495964008	DUP-2	EPA 3010A	568747	EPA 6010D	568813
92495964009	BRGWC-38S	EPA 3010A	568747	EPA 6010D	568813
92495964001	BRGWC-35S	EPA 3005A	567397	EPA 6020B	567512
92495964002	BRGWC-34S	EPA 3005A	567397	EPA 6020B	567512
92495964003	BRGWC-33S	EPA 3005A	567397	EPA 6020B	567512
92495964004	BRGWC-17S	EPA 3005A	567397	EPA 6020B	567512
92495964005	BRGWC-36S	EPA 3005A	567397	EPA 6020B	567512
92495964006	BRGWC-37S	EPA 3005A	567397	EPA 6020B	567512
92495964007	FB-1	EPA 3005A	567397	EPA 6020B	567512
92495964008	DUP-2	EPA 3005A	567397	EPA 6020B	567512
92495964009	BRGWC-38S	EPA 3005A	567743	EPA 6020B	567850
92495964001	BRGWC-35S	EPA 7470A	567375	EPA 7470A	567456
92495964002	BRGWC-34S	EPA 7470A	567375	EPA 7470A	567456
92495964003	BRGWC-33S	EPA 7470A	567375	EPA 7470A	567456
92495964004	BRGWC-17S	EPA 7470A	567375	EPA 7470A	567456
92495964005	BRGWC-36S	EPA 7470A	567375	EPA 7470A	567456
92495964006	BRGWC-37S	EPA 7470A	567375	EPA 7470A	567456
92495964007	FB-1	EPA 7470A	567375	EPA 7470A	567456
92495964008	DUP-2	EPA 7470A	567375	EPA 7470A	567456
92495964009	BRGWC-38S	EPA 7470A	568007	EPA 7470A	568119
92495964001	BRGWC-35S	SM 2450C-2011	567372		
92495964002	BRGWC-34S	SM 2450C-2011	567372		
92495964003	BRGWC-33S	SM 2450C-2011	567372		
92495964004	BRGWC-17S	SM 2450C-2011	567372		
92495964005	BRGWC-36S	SM 2450C-2011	567372		
92495964006	BRGWC-37S	SM 2450C-2011	567372		
92495964007	FB-1	SM 2450C-2011	567372		
92495964008	DUP-2	SM 2450C-2011	567372		
92495964009	BRGWC-38S	SM 2450C-2011	567882		
92495964001	BRGWC-35S	EPA 300.0 Rev 2.1 1993	567607		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH E NETWORK

Pace Project No.: 92495964

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495964002	BRGWC-34S	EPA 300.0 Rev 2.1 1993	567607		
92495964003	BRGWC-33S	EPA 300.0 Rev 2.1 1993	567607		
92495964004	BRGWC-17S	EPA 300.0 Rev 2.1 1993	567607		
92495964005	BRGWC-36S	EPA 300.0 Rev 2.1 1993	567607		
92495964006	BRGWC-37S	EPA 300.0 Rev 2.1 1993	567607		
92495964007	FB-1	EPA 300.0 Rev 2.1 1993	567607		
92495964008	DUP-2	EPA 300.0 Rev 2.1 1993	567607		
92495964009	BRGWC-38S	EPA 300.0 Rev 2.1 1993	567943		

REPORT OF LABORATORY ANALYSIS

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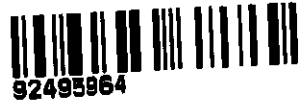


Sample Condition Upon Receipt

Client Name: G. Alower

WO#: 92495964

Courier: Fed Ex UPS USPS Client Commercial Pace
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 214 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Comments: _____
Date and initials of person examining contents: 9/15/2008

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, coliform, TOC, O&G, W-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)



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: Plant Branch E Network
 Project # CCR 3rd Semi-Annual
 Collected By (print): Travis Martinez, Andrea McClure
 Turnaround Date Required:
 Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day
 (Expedite Charges Apply)

Container Preservative Type **
 1 [] 2 [] 3 [] 4 [] 5 [] 6 [] 7 [] 8 [] 9 [] (C) [] (U) [] (O) []
 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-355	GW	G	9-16-2020	0905			5.96	7
BRGWC-345	GW	G	9-16-2020	0959			5.81	5
BRGWC-335	GW	G	9-16-2020	1102			4.78	5
BRGWC-175	GW	G	9-16-2020	1230			6.26	5
BRGWC-365	GW	G	9-16-2020	1521			5.58	5
BRGWC-375	GW	G	9-16-2020	1609			5.84	5
FB-1	W	G	9-16-2020	1010			-	5
DUP-2	GW	G	9-16-2020	--			-	5

Metals 601.0/602.0/747D - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226, 228
X	X	X	X
X	X	X	X
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
 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:
 92495964
 + 2 Radium

(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#: 215
 Cooler 1 Temp Upon Receipt: 11.0C
 Cooler 1 Therm Corr. Factor: 1.0C
 Cooler 1 Corrected Temp: 12.0C
 Comments:

Relinquished by/Company: (Signature) *Joju Abraham* Date/Time: 9-17-2020/0800
 Received by/Company: (Signature) *Charles Hinkle* Date/Time: 9/17/20 1000
 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



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: Joju Abraham		Email To: scsinvoices@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: [] PT [] MT [] CT [] ET
Phone: (404) 506-7239 Email: jabraham@southernco.com		Project Name: Plant Branch E Network Project # CCR 3rd Semi-Annual Pace Profile#
Collected By (print): Travis Martinez, Andrea McClure		Purchase Order # Quote # Pace Project Manager: kevin.herring@pacelabs.com
Collected By (signature): <i>[Signature]</i>		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
Analyses: _____		

* 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 (for Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWC-38s	Gw	G	9-17-2020	1126			4.17	5

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

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type: **

1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

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 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:	92495964	009

(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 #: _____

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

Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 9-18-2020/0800

Received by/Company: (Signature) *[Signature]* Date/Time: 9/17/20 2015

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 1 Therm Corr. Factor: °C

Cooler 2 Corrected Temp: 3.8 °C

Comments: _____

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): _____ Page: 1 of 1

YES / NO

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

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

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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
92496249001	PZ-51S					
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	
92496249002	PZ-51I					
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	0.241 ± 0.236 (0.445) C:80% T:NA	pCi/L	09/30/20 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.711 ± 0.513 (1.00) C:65% T:78%	pCi/L	10/06/20 11:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.952 ± 0.749 (1.45)	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	0.798 ± 0.353 (0.410) C:93% T:NA	pCi/L	09/30/20 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.960 ± 0.553 (1.02) C:64% T:77%	pCi/L	10/06/20 11:52	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.76 ± 0.906 (1.43)	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

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 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 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)

F-ALLC003rev.3. 11September2006



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)	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

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
 Purchased By: 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
 Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply)
 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]*
 Date/Time: 9-18-2020/0800
 Relinquished by/Company (Signature):
 Date/Time:
 Relinquished by/Company (Signature):
 Date/Time:

Received by/Company (Signature): *[Signature]*
 Date/Time: 9/17/2010/15
 Received 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



Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: LAL
Date: 9/29/2020
Worklist: 56346
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	2008971	
MB concentration:	-0.021	
M/B 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)?	
	LCS56346	LCSD56346
Count Date:	9/30/2020	9/30/2020
Spike I.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	0.508
Target Conc. (pCi/L, g, F):	4.774	4.731
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	5.388	4.719
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.860	0.780
Numerical Performance Indicator:	1.40	-0.03
Percent Recovery:	112.87%	99.74%
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 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.:	LCS56346	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD56346	
Sample Result (pCi/L, g, F):	5.388	
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):	0.780	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.129	92496249001
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.34%	92496249001DUP
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:

Qual 1/2020

LAM 10/1/2020



Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/29/2020
Worklist: 56346
Matrix: DW

Method Blank Assessment		
MB Sample ID		2008971
MB concentration:		-0.021
M/B Counting Uncertainty:		0.170
MB MDC:		0.462
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)?	
	LCS56346	LCSD56346
Count Date:	9/30/2020	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	4.774	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.388	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.860	
Numerical Performance Indicator:	1.40	
Percent Recovery:	112.87%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	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.:	92496249001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92496249001DUP	
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 RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.992	92496249001
Duplicate RPD:	60.82%	92496249001DUP
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.~~ N/A

LAL 10/1/2020

Mud 10/1/2020

LAL 10/1/2020



Quality Control Sample Performance Assessment

Test: Ra-228
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	2008973
MB concentration:	0.789
M/B 2 Sigma CSU:	0.460
MB MDC:	0.832
MB Numerical Performance Indicator:	3.36
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	N
		LCS56347
Count Date:	10/6/2020	
Spike I.D.:	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):	4.687	
Uncertainty (Calculated):	0.230	
Result (pCi/L, g, F):	6.664	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.522	
Numerical Performance Indicator:	2.52	
Percent Recovery:	142.18%	
Status vs Numerical Indicator:	Warning	
Status vs Recovery:	Fail High**	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	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 Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	92496249001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	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):	0.545	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	1.254	92496249001
Duplicate RPD:	101.60%	92496249001DUP
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Fail***	
% 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.

**If all sample results are below MDC, the batch is acceptable, otherwise this batch must be re-prepped due to LCS failure.

OK for report NI < 3 acceptable for all WT batch

OK 10/17/2020

10-1-20

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

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

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

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

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92496260001	PZ-51S					
	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	
92496260002	PZ-51I					
	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.77	Std. Units			1		09/18/20 11:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.93	Std. Units			1		09/18/20 11:29		
6010D ATL ICP									
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	
6020 MET ICPMS									
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	
7470 Mercury									
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	
2540C Total Dissolved Solids									
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		
300.0 IC Anions 28 Days									
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

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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	MS Result	MSD Spike Conc.	MS Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 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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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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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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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.	Result								
Chloride	mg/L	105	50	50	152	155	94	101	90-110	2	10		
Fluoride	mg/L	0.10	2.5	2.5	2.7	2.7	103	104	90-110	1	10		
Sulfate	mg/L	209	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.	Result								
Chloride	mg/L	ND	50	50	52.8	52.5	106	105	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	104	90-110	1	10		
Sulfate	mg/L	ND	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

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 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 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#	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-)		
	BP3M-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)		
	AG0U-100 mL Amber Unpreserved vials (N/A)		
	VG6U-20 mL Scintillation 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 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

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		Billing Information:	
Address: 2480 Maner Road Atlanta, GA 30339			
Report To: Joju Abraham		Email To: scinvoices@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	
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		Purchase Order # Quote #	
Collected By (signature): <i>[Signature]</i>		Pace Project Manager: kevin.herring@pacelabs.com Immediately Packed on Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Rush: <input type="checkbox"/> Same Day <input type="checkbox"/> Next Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 4 Day <input type="checkbox"/> 5 Day (Expedite Charges Apply)		Field Filtered (if applicable) <input type="checkbox"/> Yes <input type="checkbox"/> 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)

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 bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other							
Analyses				Lab Profile/Liner:			
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 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 CI Strips: Sample pH Acceptable Y N NA pH Strips: Sulfide Present Y N NA Lead Acetate Strips: _____			
LAB USE ONLY: Lab Sample # / Comments: <i>924916260</i> <i>+2 Radium</i>							

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Conc
			Date	Time	Date	Time		
PZ-5Is	Gw	6	9-17-2020	1244			5.77	7
PZ-5II	Gw	6	9-17-2020	1302			4.93	5

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, U, 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: <i>3.8</i> 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) <i>[Signature] / Golder</i>	Date/Time: 9-18-2020/0800	Received by/Company: (Signature) <i>Charles Fowle</i>	Date/Time: 9/17/2010/15	MTJL LAB USE ONLY Table # _____
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	AccNum: 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

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

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

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

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

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

REPORT OF LABORATORY ANALYSIS

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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					
92502483001	PZ-50D					
	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	
92502483002	PZ-51D					
	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	
92502483003	PZ-51I					
	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	
92502483004	FB					
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
92502483005	EB					
EPA 6010D	Potassium	0.067J	mg/L	0.20	11/04/20 21:59	B
92502483006	FD					
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 ₃	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/28/20 15:41		
pH	6.47	Std. Units			1		10/28/20 15:41		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	9.7	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:28	7440-09-7	
Sodium	31.9	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:28	7440-23-5	
Calcium	159	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:28	7440-70-2	
Magnesium	49.2	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:28	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	0.15	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	0.0037J	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 18:43	7440-48-4	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	914	mg/L	20.0	20.0	1		10/28/20 18:53		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO3	90.2	mg/L	5.0	5.0	1		11/10/20 14:52		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.6	mg/L	1.0	0.60	1		10/30/20 13:08	16887-00-6	
Fluoride	0.28	mg/L	0.10	0.050	1		10/30/20 13:08	16984-48-8	
Sulfate	492	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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/28/20 15:41		
pH	6.79	Std. Units			1		10/28/20 15:41		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	8.7	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:33	7440-09-7	
Sodium	25.2	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:33	7440-23-5	
Calcium	132	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:33	7440-70-2	
Magnesium	32.5	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:33	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	0.029J	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	0.00041J	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:01	7440-48-4	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	680	mg/L	20.0	20.0	1		10/28/20 18:53		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO3	116	mg/L	5.0	5.0	1		11/10/20 15:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.3	mg/L	1.0	0.60	1		10/30/20 13:22	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		10/30/20 13:22	16984-48-8	
Sulfate	357	mg/L	8.0	4.0	8		10/31/20 00:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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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
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/28/20 15:41		
pH	5.49	Std. Units			1		10/28/20 15:41		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	10.9	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:38	7440-09-7	
Sodium	42.6	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:38	7440-23-5	
Calcium	183	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:38	7440-70-2	
Magnesium	111	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:38	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	0.37	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:06	7440-42-8	
Cadmium	0.0051	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:06	7440-43-9	
Cobalt	0.020	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:06	7440-48-4	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1200	mg/L	50.0	50.0	1		10/28/20 18:53		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO3	22.9	mg/L	5.0	5.0	1		11/10/20 15:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	11.0	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	893	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				
6010D ATL ICP									
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	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	0.0054J	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	
2540C Total Dissolved Solids									
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		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		11/10/20 15:37		
300.0 IC Anions 28 Days									
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				
6010D ATL ICP		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	
6020 MET ICPMS		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	
2540C Total Dissolved Solids		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		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		11/10/20 15:41		
300.0 IC Anions 28 Days		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				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	10.8	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 22:04	7440-09-7	
Sodium	42.4	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 22:04	7440-23-5	
Calcium	183	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 22:04	7440-70-2	
Magnesium	111	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 22:04	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	0.32	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:41	7440-42-8	
Cadmium	0.0043	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:41	7440-43-9	
Cobalt	0.018	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:41	7440-48-4	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	1390	mg/L	50.0	50.0	1		10/28/20 18:55		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Total as CaCO ₃	23.0	mg/L	5.0	5.0	1		11/10/20 15:45		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	11.0	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	892	mg/L	20.0	10.0	20		10/31/20 01:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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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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REPORT OF LABORATORY ANALYSIS

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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 ₃	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 ₃	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 ₃	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 ₃	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	50	50	50.0	50.1	100	100	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	99	100	90-110	1	10		
Sulfate	mg/L	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	50	50	50.1	50.3	100	101	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	93	97	90-110	4	10		
Sulfate	mg/L	ND	50	50	48.2	48.4	96	97	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PLANT BRANCH

Pace Project No.: 92502483

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		

REPORT OF LABORATORY ANALYSIS

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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 TR214 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)	AGOU-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.

Section A		Section B		Section C		Page: 1 Of 1	
Required Client Information:		Required Project Information:		Invoice Information:			
Company: Golden 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:		Regulatory Agency	
a1: karim_minkara@golder.com		Project Name: Plant Branch		Pace Quote:		State / Location	
Phone: (615)566-1402 Fax:		Project #:		Pace Project Manager: kevin.berrington@pacelabs.com		GA	
Requested Due Date:				Pace Profile #: 10038			

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, -, /) Sample IDs must be unique	MATRIX CODE (See valid codes to left)	COLLECTED				SAMPLE TEMP AT COLLECTION	PRESERVATIVES							ANALYSIS TOAST	REQUESTED ANALYSIS FILTERED (Y/N)					RESIDUAL CHLORINE (Y/N)	
			DATE		TIME			UNPREPARED	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol		Other	C, F, SO4/Cl	TDS	B, Ca, Cd, Co, Cu, Ni, Pb, K			
			START	END	DATE	TIME																
1	PZ-S0D	WG	10-27-20	07:40	09:00	32									X	X	X					pH = 6.47
2	PZ-S1D	WG	10-27-20		12:45	32									X	X	X					pH = 6.79
3	PZ-S1I	WG	10-27-20		14:10	32									X	X	X					pH = 5.49
4	FB	WG	10-27-20		10:00	32									X	X	X					
5	EB	WG	10-27-20		11:20	32									X	X	X					
6	FD	WG	10-27-20		-	32									X	X	X					
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Karim / 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	Recovered on		
PRINT Name of SAMPLER:	Karim Minkara			Isot:	(Y/N)
SIGNATURE of SAMPLER:	<i>Karim Minkara</i>			Colony	(Y/N)
DATE Signed: 10-27-2020		Residual	(Y/N)		
		Cooler	(Y/N)		
		Sanitiz	(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:

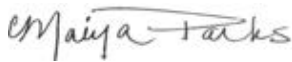
Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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

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

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

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

Sample:	Lab ID:	Collected:	Received:	Matrix:				
LR-1	92501802001	10/22/20 12:10	10/22/20 15:14	Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
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
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	24.2	mg/L	5.0	1		10/28/20 13:19		
Alkalinity, Total as CaCO3	24.2	mg/L	5.0	1		10/28/20 13:19		
300.0 IC Anions 28 Days								
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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	25.6	mg/L	5.0	1		10/28/20 13:25		
Alkalinity, Total as CaCO ₃	25.6	mg/L	5.0	1		10/28/20 13:25		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
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		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		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
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.8	mg/L	0.20	1	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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
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		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.0	mg/L	1.0	1		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

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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	92501802001 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	0.95	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	

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

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	

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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 ₃	mg/L	ND	5.0	10/28/20 12:39	
Alkalinity, Bicarbonate (CaCO ₃)	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 ₃	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 ₃	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 ₃	mg/L	146	50	50	195	197	99	104	80-120	1	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.: 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		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

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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Sample Condition Upon Receipt



Client Name: GA POWER

WO#: 92501802

PM: MP Due Date: 10/29/20

CLIENT: GA-ArcadAtI

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 TH214 Type of Ice: Ice Blue None Samples on ice, cooling process has begun

Cooler Temperature 10.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: KRW 10/22/20

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. <u>Standard</u>
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, 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)

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

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

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

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
6010D ATL ICP		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	
6020 MET ICPMS		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	
2540C Total Dissolved Solids		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		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	25.8	mg/L	5.0	1		02/10/21 14:12		
Alkalinity, Total as CaCO ₃	25.8	mg/L	5.0	1		02/10/21 14:12		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.7	mg/L	1.0	1		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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	24.3	mg/L	5.0	1		02/10/21 14:19		
Alkalinity, Total as CaCO ₃	24.3	mg/L	5.0	1		02/10/21 14:19		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		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	

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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
6010D ATL ICP		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	
6020 MET ICPMS		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	
2540C Total Dissolved Solids		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		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	24.2	mg/L	5.0	1		02/10/21 14:26		
Alkalinity, Total as CaCO ₃	24.2	mg/L	5.0	1		02/10/21 14:26		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.8	mg/L	1.0	1		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	

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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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	24.9	mg/L	5.0	1		02/10/21 14:33		
Alkalinity, Total as CaCO ₃	24.9	mg/L	5.0	1		02/10/21 14:33		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		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	

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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
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.6	mg/L	0.20	1	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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	24.6	mg/L	5.0	1		02/10/21 14:53		
Alkalinity, Total as CaCO ₃	24.6	mg/L	5.0	1		02/10/21 14:53		
300.0 IC Anions 28 Days								
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	

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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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92520473001 Result	Spike Conc.	Spike Conc.	Conc.								
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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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 ₃	mg/L	ND	5.0	02/10/21 13:15	
Alkalinity, Bicarbonate (CaCO ₃)	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 ₃	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 ₃	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 ₃	mg/L	ND	50	50	50.1	50.1	100	100	80-120	0	25	

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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

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.

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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		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

	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:

Arcadis Atlanta

Project #:

WO#: 92520473

PM: MP

Due Date: 02/11/21

CLIENT: GA-ArcadAtl

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: THR214

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 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

A handwritten signature in black ink that reads "Denise M. Toney".

**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 ₃	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 ₂	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	ORTHOPHOSPHATE 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

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Commonwealth of Virginia
 Department of General Services
 Division of Consolidated Laboratory Services



Scope of Accreditation

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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 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	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 CaCO3	VA
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	VA
SM 2540 F-2011	RESIDUE-SETTLABLE	VA
SM 4500-CL ⁻ 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 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 9040 C	PH	VA
EPA 9056 A	CHLORIDE	VA
EPA 9056 A	NITRATE AS N	VA
EPA 9056 A	ORTHOPHOSPHATE AS P	VA
EPA 9056 A - EXTENDED	NITRATE/NITRITE	VA
EPA 9095 B	FREE LIQUID	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 ⁻ E-2011	CYANIDE	VA
SM 4500-S2 ⁻ 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

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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

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Issue Date: 10/6/2020

Expiration Date: 6/30/2021



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
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

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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
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



Laboratory Scope of Accreditation

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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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

Location Name: BRGWA-2I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56.96 ft Total Depth: 66.96 ft Initial Depth to Water: 14.34 ft	Pump Type: QED Well Wizard Tubing Type: Polyethylene Pump Intake From TOC: 61.96 ft Estimated Total Volume Pumped: 6300 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 1.79 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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

Location Name: BRGWA-2S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.39 ft Total Depth: 47.39 ft Initial Depth to Water: 14.53 ft	Pump Type: QED Well Wizard Tubing Type: Polyethylene Pump Intake From TOC: 42.39 ft Estimated Total Volume Pumped: 6801.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.12 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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

Location Name: BRGWA-5I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.82 ft Total Depth: 63.82 ft Initial Depth to Water: 11.63 ft	Pump Type: QED Well Wizard Tubing Type: Polyethylene Pump Intake From TOC: 58.82 ft Estimated Total Volume Pumped: 4600 ml Flow Cell Volume: 90 ml Final Flow Rate: 230 ml/min Final Draw Down: 0.11 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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

Location Name: BRGWA-5S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.01 ft Total Depth: 43.01 ft Initial Depth to Water: 11.68 ft	Pump Type: QED Well Wizard Tubing Type: Polyethylene Pump Intake From TOC: 38.01 m Estimated Total Volume Pumped: 4600 ml Flow Cell Volume: 90 ml Final Flow Rate: 230 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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 μ 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 μ 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 μ 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 μ 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

Location Name: BRGWC-25I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 14.41 ft Total Depth: 24.41 ft Initial Depth to Water: 8.99 ft	Pump Type: QED Well Wizard Tubing Type: Polyethylene Pump Intake From TOC: 19.41 ft Estimated Total Volume Pumped: 4400 ml Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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 μ 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 μ 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 μ 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 μ 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 μ 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 μ 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

Location Name: BRGWC-50 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.76 ft Total Depth: 68.76 ft Initial Depth to Water: 36.85 ft	Pump Type: QED Sample Pro Tubing Type: Polyethylene Pump Intake From TOC: 63.76 ft Estimated Total Volume Pumped: 10850 ml Flow Cell Volume: 90 ml Final Flow Rate: 155 ml/min Final Draw Down: -0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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 μ 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 μ 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

Location Name: PZ-51S Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 42.98 ft Total Depth: 47.98 ft Initial Depth to Water: 37.19 ft	Pump Type: QED Sample Pro Tubing Type: Polyethylene Pump Intake From TOC: 45 ft Estimated Total Volume Pumped: 3450 ml Flow Cell Volume: 90 ml Final Flow Rate: 115 ml/min Final Draw Down: 1.41 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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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 μ 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 μ 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 μ 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 μ 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

Project Plant Branch
 Field Staff D. Cox / T. Martinez

9th Sample Event *7/21*

Instrument Calibration

Date: ~~3-3-2020~~ Date: *3-4-2020* Date: ~~3-5-2020~~ Date:
 Time: ~~0715~~ Time: *0719* Time: ~~0744~~ Time:

Parameter	Units	Standard	SmarTROLL SN <i>646773</i>	SmarTROLL SN <i>646773</i>	SmarTROLL SN <i>646773</i>	SmarTROLL SN _____
DO	% saturation	100	<i>91.8%</i>	<i>91.2%</i>	<i>90.8%</i>	
Conductivity	us/cm 4490 <i>4490</i>	4490 <i>4490</i>	<i>4895</i>	<i>4381</i>	<i>4404</i>	
pH	S.U.	4.00	<i>4.46</i>	<i>4.45</i>	<i>4.52</i>	
pH	S.U.	7.00	7.22 <i>7.22</i>	<i>7.26</i>	<i>7.29</i>	
pH	S.U.	10.00	<i>10.00</i>	<i>10.00</i>	<i>10.03</i>	
ORP	mV	228.00	<i>235.3</i>	<i>233.9</i>	<i>233.8</i>	

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

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 <i>4490</i>	4490 <i>4490</i>				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN <i>2289-2672</i>	LaMotte SN <i>2289-2672</i>	LaMotte SN <i>2289-2672</i>	LaMotte SN _____
	NTU	0.0	<i>-0.02</i>	<i>-0.07</i>	<i>0.01</i>	
	NTU	1.0	<i>1.04</i>	<i>1.00</i>	<i>1.08</i>	
	NTU	10.0	<i>9.24</i>	<i>10.56</i>	<i>10.07</i>	

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. Cox / T. Martinez

9th Sample Event

Instrument Calibration

Date: 3/3/2020 Date: 3-4-2020 Date: 3-5-2020 Date:
 Time: 720 Time: 720 Time: 725 Time:

Parameter	Units	Standard	SmarTROLL SN <u>643819</u>	SmarTROLL SN <u>643819</u>	SmarTROLL SN <u>643819</u>	SmarTROLL SN _____
DO	% saturation	100	95.6	95.7	94.9	
Conductivity	us/cm	400 400	458.0	426.8	431.8	
pH	S.U.	4.00	4.71	4.67	4.91	
pH	S.U.	7.00	7.48	7.49	7.66	
pH	S.U.	10.00	10.19	10.21	16.33	
ORP	mV	228.00	218.6	217.9	212.6	

Turbidity	Units	Standard	LaMotte SN <u>7607</u>	LaMotte SN <u>7607</u>	LaMotte SN <u>7607</u>	LaMotte SN _____
	NTU	0.0	0.0	0.0	0.0	
	NTU	1.0	1.12	1.07	0.99	
	NTU	10.0	9.27	9.41	9.78	

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	400 400				
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 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 465016	SmarTROLL SN 465016	SmarTROLL SN 465016	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 2279-2612	LaMotte SN 2279-2612	LaMotte SN 2279-2612	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: ^{D1} ~~0830-1015-20~~ Time: ^{DT} ~~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 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.

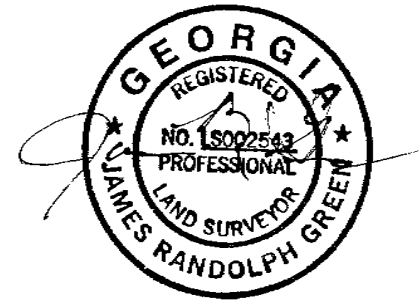

James R. Green R.L.S. No. 2543

Date: 11/4/20



Plant Branch
 Monitoring Well Locations
 November 3, 2020

Well ID	LATITUDE	LONGITUDE	NAIL NORTHING	NAIL EASTING	NAIL ELEVATION	PVC NORTHING	PVC EASTING	PVC ELEVATION	ELEV AT BASE CONC/GRD
IW-E-1	N33.198117	W83.327753	1164319.1	2553199.5	436.39	1164318.5	2553200.4	439.49	436.4
IW-D-2	N33.192791	W83.311136	1162422.3	2558298.6	407.12	1162422.3	2558297.6	409.93	407.1
IW-D-1	N33.191078	W83.310119	1161801.4	2558614.9	403.61	1161801.5	2558614.0	406.44	403.6
IW-C-2	N33.190286	W83.305869	1161524.2	2559917.4	395.11	1161523.0	2559917.3	397.64	395.1
IW-C-1	N33.190367	W83.308256	1161547.4	2559187.0	395.35	1161546.3	2559186.8	398.00	395.4
IW-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	380.86	378.3
PZ-51D	N33.190548	W83.297643	1161640.3	2562433.0	378.12	1161639.8	2562434.0	380.75	378.1
IW-B-1	N33.189085	W83.300799	1161099.7	2561472.0	376.29	1161100.8	2561471.6	379.01	376.3



APPENDIX A

WELL INSPECTION LOGS

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-49		✓	✓	✓	✓	NA
IW-C-1 Sw-B-2		✓	✓	Slightly overgrown	✓	NA
IW-B-1		✓	✓	✓	✓	NA
IW-D-1		✓	✓	✓	✓	NA
IW-E-1		✓	✓	✓	✓	NA
IW-C-1 Sw-C-1	Access difficult - path overgrown	✓	✓	✓	✓	NA
IW-C-2	Access difficult - overgrown	✓	✓	✓	✓	NA
IW-D-2	✓	✓	✓	✓	✓	NA
DW-01		Did not check during this event				NA
DW-02		Did not check during this event				NA
PB-15	<p style="text-align: center;">NOTE: All of the PB wells are just the 2" PVC. No concrete pads, no well casings, no locks.</p>					NA
PB-2D						
PB-4S						
PB-4D						
PB-7S						
PB-8D						
PB-8S						
PB-10D						
PB-10S						
PB-13D						
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 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)
	↑ 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	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)
	↑ or ↓					
PZ-165		✓	✓	Pad not stable	✓	/
PZ-161		✓	✓	Pad not stable	✓	/
PZ-171		✓	✓	✓	✓	/
PZ-185		✓	✓	✓	✓	/
PZ-181		✓	✓	✓	✓	/
PZ-195		✓	✓	✓	✓	/
PZ-191		✓	✓	✓	✓	/
PZ-205		✓	✓	✓	✓	/
PZ-201		✓	✓	✓	✓	/
PZ-215		✓	✓	✓	✓	/
PZ-211		✓	✓	✓	✓	/
PZ-225		✓	✓	✓	✓	/
PZ-245	✓	✓	✓	✓	✓	/
PZ-261	✓	✓	✓	✓	✓	/
PZ-281	✓	✓	✓	✓	✓	/
PZ-315	✓	✓	✓	✓	✓	/
PZ-231	✓	✓	✓	✓	✓	/
PZ-405	✓	✓	✓	✓	✓	/
PZ-415	✓	✓	✓	✓	✓	/
PZ-425	✓	✓	✓	✓	✓	/
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	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)
	↑ or ↓					
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 ↓	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)
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 ↑ or ↓	LOCATION / IDENTIFICATION 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)	PROTECTIVE CASING 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)	SURFACE PAD 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)	INTERNAL CASING 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)	SAMPLING (Groundwater Wells Only) 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.

APPENDIX A

DATA VALIDATION SUMMARIES

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

Laboratory Precision:	Laboratory goals for precision were met
Field Precision:	Field goals for precision were met.
Accuracy:	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.
Detection Limits:	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.
Completeness:	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, 92495964, 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.

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	-	-
92495964	BRGWA-5S	9/15/2020	92495654002	GW	-	-	-	-	-	-	X	-	-
92495964	BRGWA-5I	9/15/2020	92495654003	GW	-	-	-	-	-	-	X	-	-
92495964	BRGWA-2S	9/15/2020	92495654004	GW	-	-	-	-	-	-	X	-	-
92495964	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

<i>SDG</i>	<i>Sample Name</i>	<i>Constituent</i>	<i>New Result</i>	<i>New RL or MDC</i>	<i>Qualifier</i>	<i>Reason</i>
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

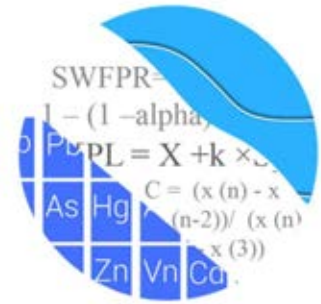
Qualifiers:

U : Non-detect result
J : Estimated value
J-+ : Estimated value, bias high

APPENDIX B

STATISTICAL ANALYSES

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

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

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
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
Boron (mg/L)	BRGWC-27I	-0.2108	-47	-43	Yes	13	0	n/a	n/a	0.01	NP
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
Calcium (mg/L)	BRGWC-25I	-6.82	-52	-38	Yes	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-27I	-4.805	-30	-38	No	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
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
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
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
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)	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
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
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
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	-50.85	-41	-38	Yes	12	0	n/a	n/a	0.01	NP
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)

PLANT BRANCH PONDS B,C,D GWPS			
Constituent Name	MCL	Background Limit	GWPS
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)
Cadmium (mg/L)	BRGWC-50	0.0482	0.01365	0.005	Yes 13	0.03269	0.02633	0	None	sqrt(x)	0.01	Param.
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)
Cobalt (mg/L)	BRGWC-50	1.5	1.3	0.014	Yes 13	1.392	0.06405	0	None	No	0.01	NP (normality)
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)

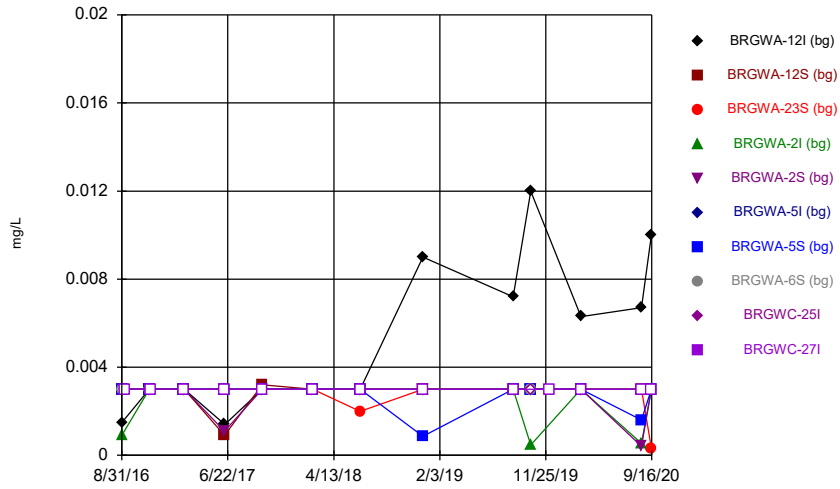
Outlier Summary

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 10:26 AM

	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)			

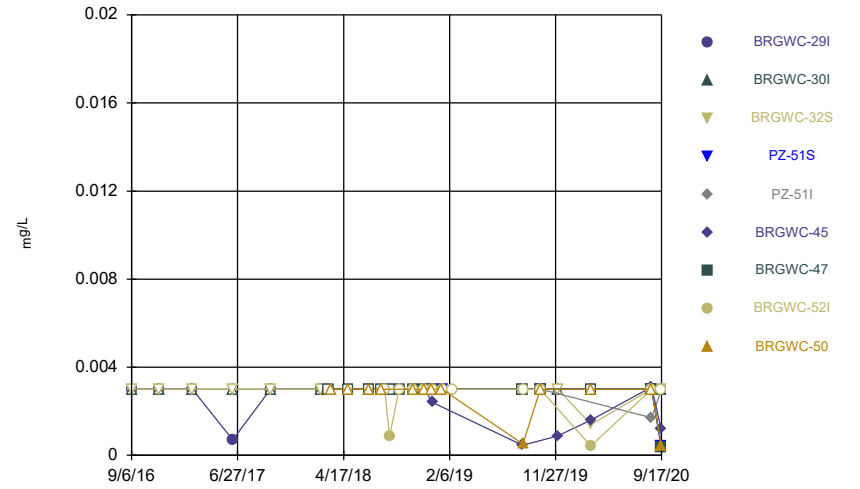
FIGURE A.

Time Series



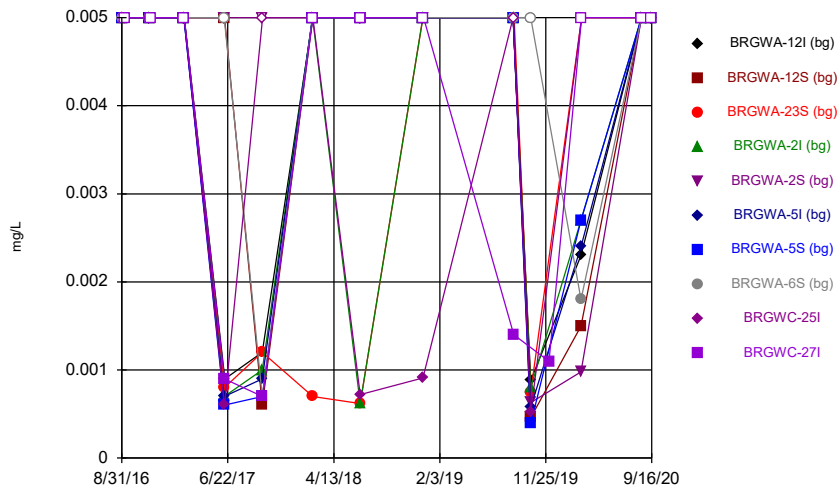
Constituent: Antimony Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



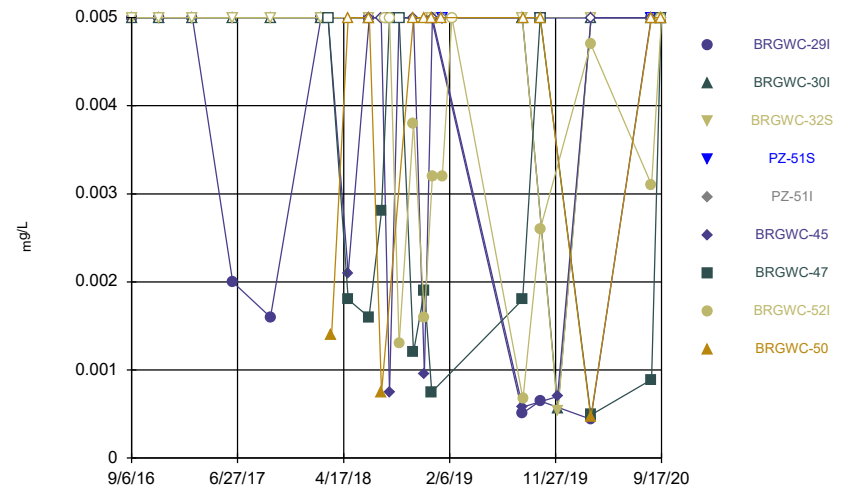
Constituent: Antimony Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



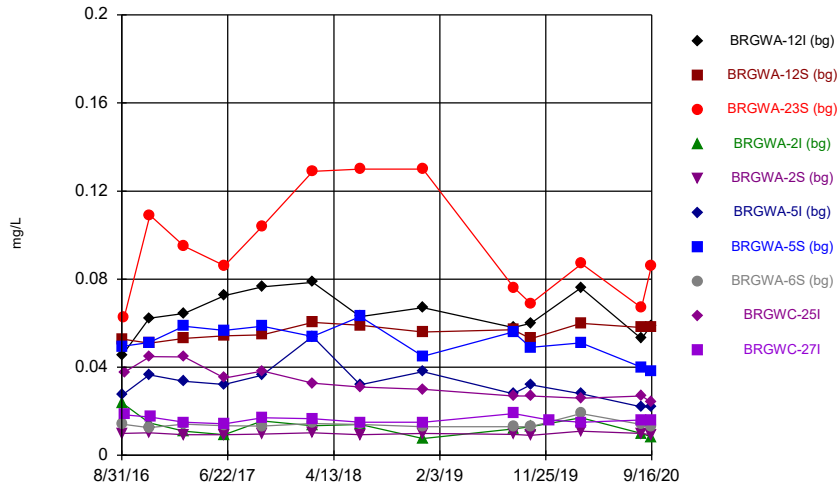
Constituent: Arsenic Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

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

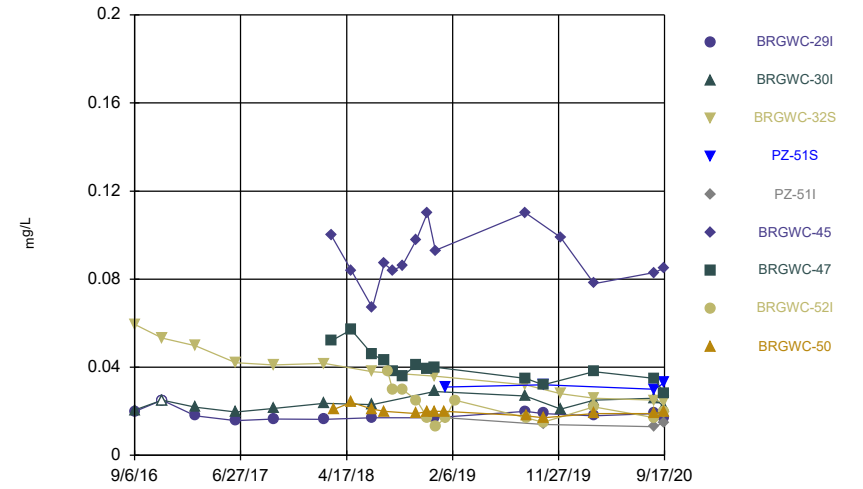
Time Series



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.

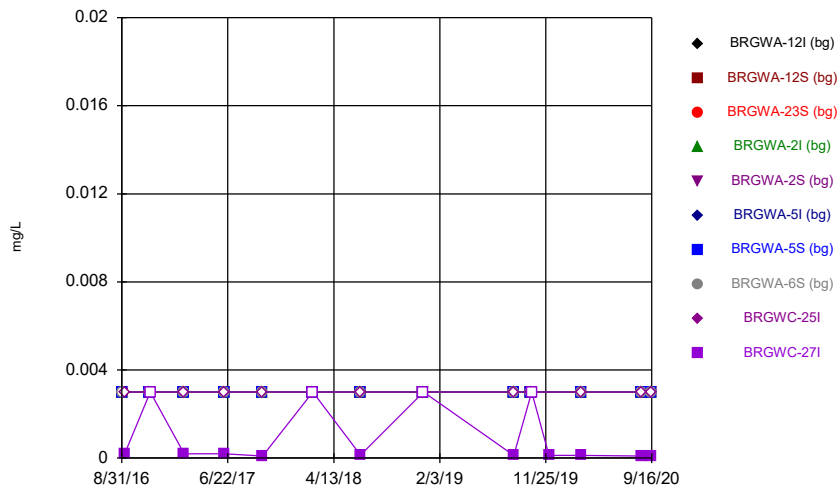
Time Series



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.

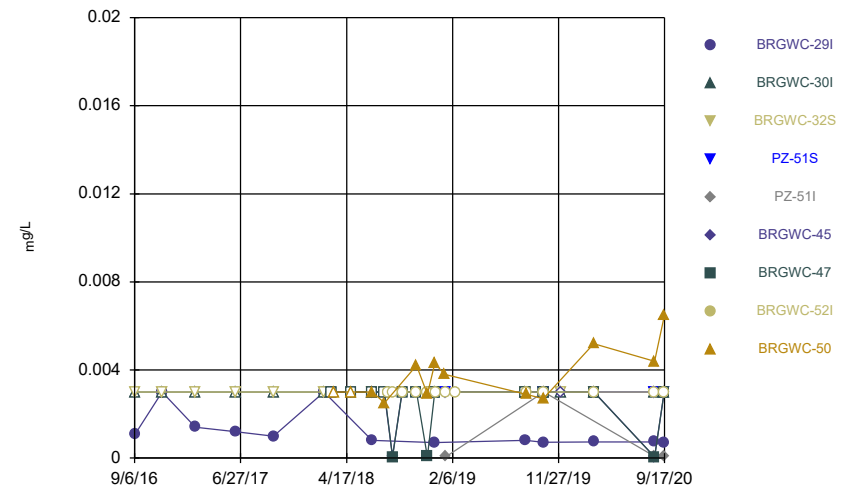
Time Series



Constituent: Beryllium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

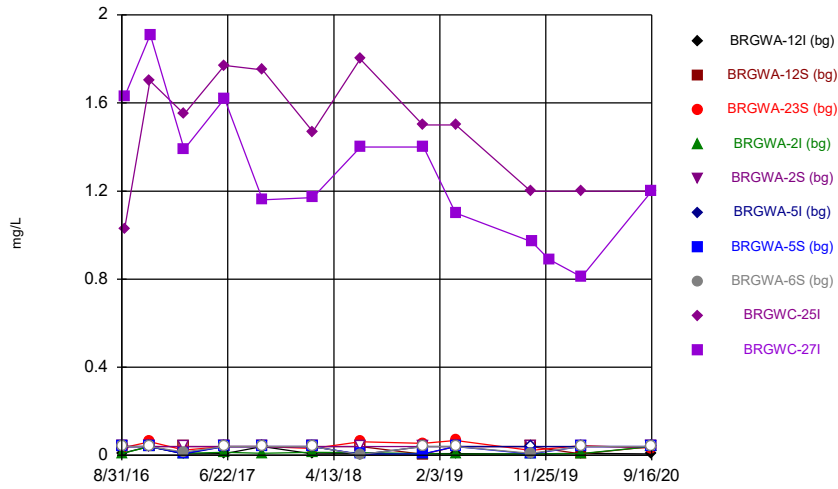
Hollow symbols indicate censored values.

Time Series



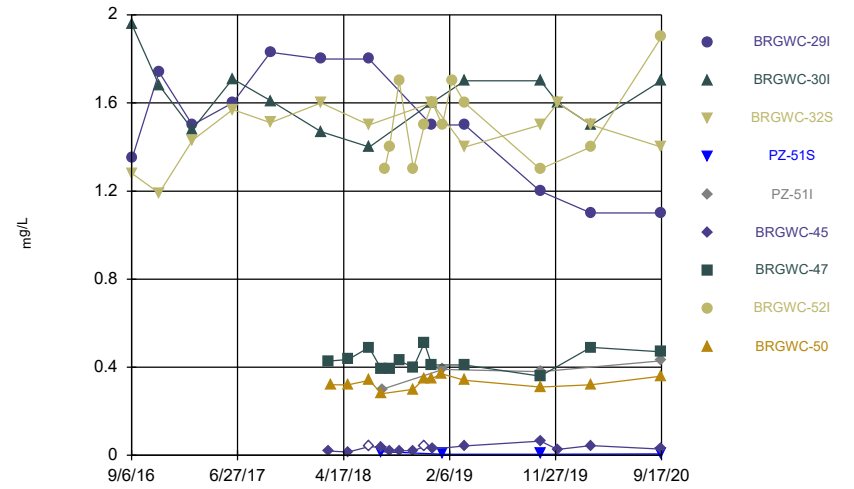
Constituent: Beryllium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



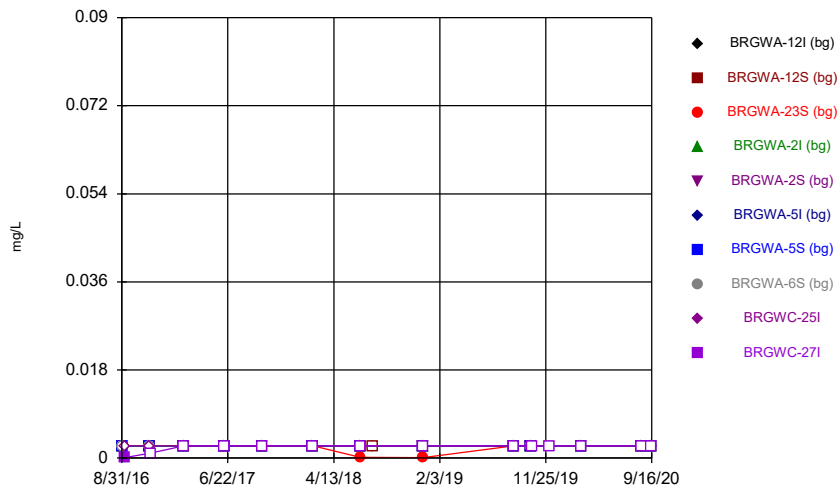
Constituent: Boron Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



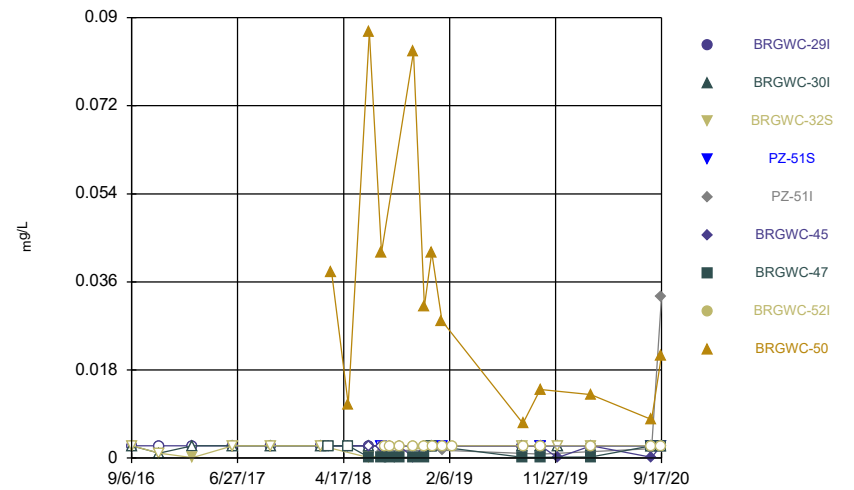
Constituent: Boron Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



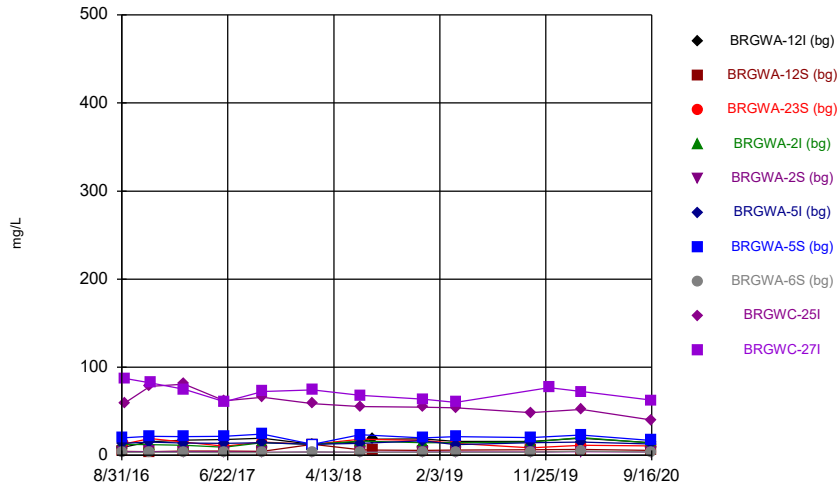
Constituent: Cadmium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



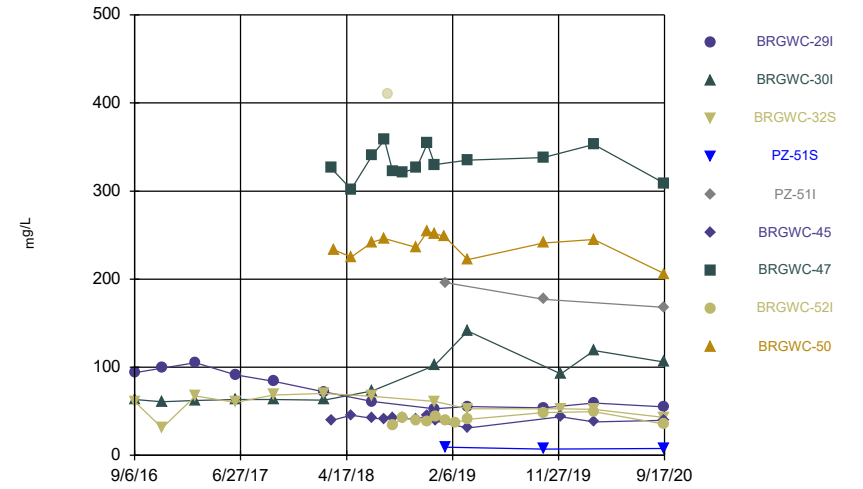
Constituent: Cadmium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



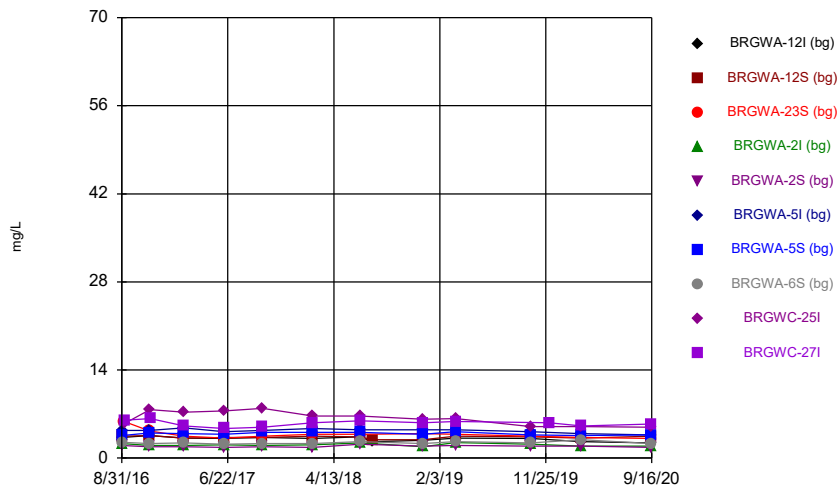
Constituent: Calcium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



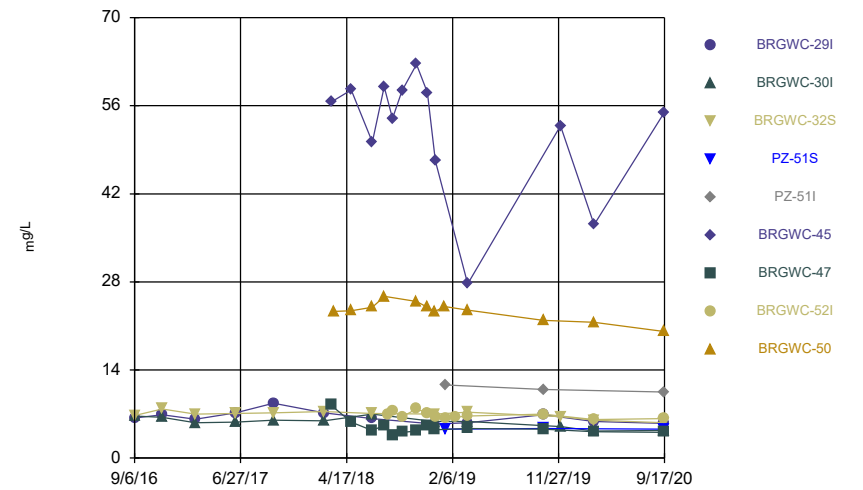
Constituent: Calcium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



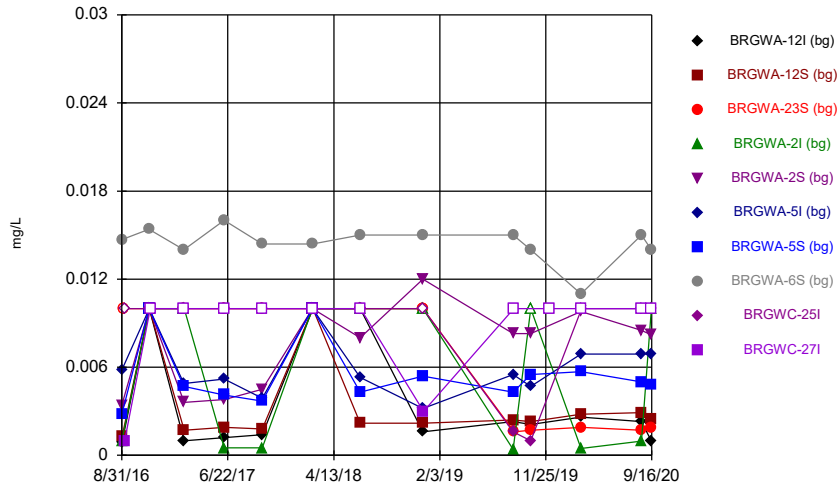
Constituent: Chloride, Total Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



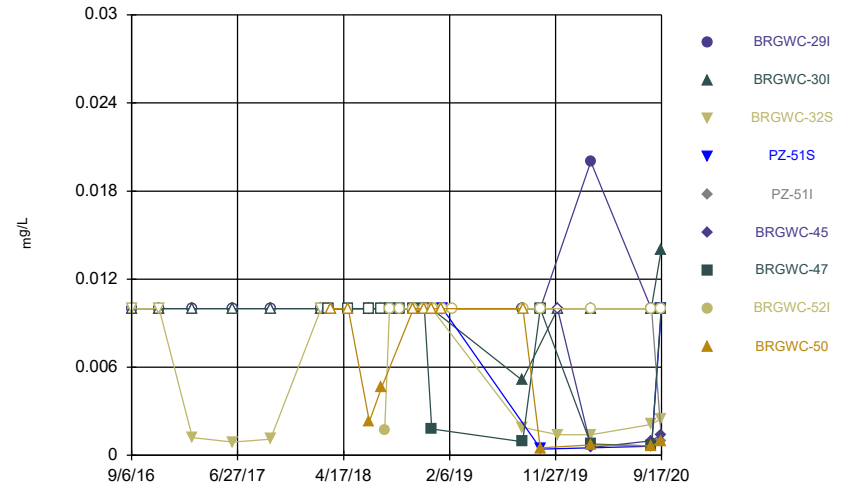
Constituent: Chloride, Total Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



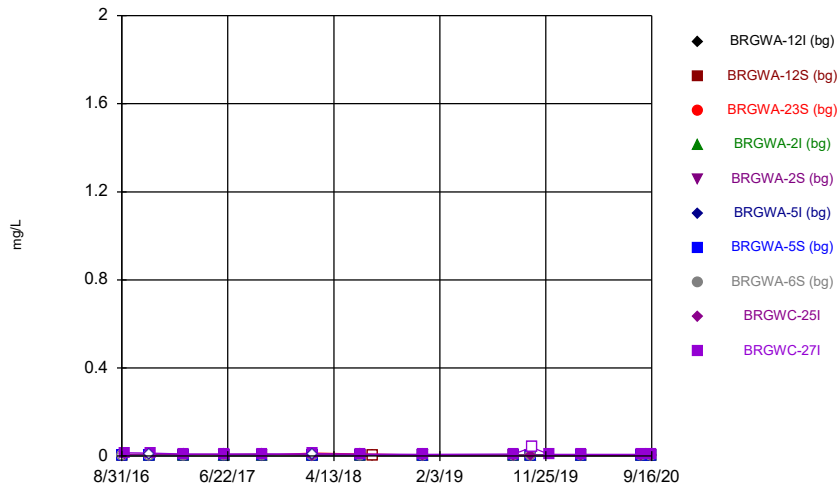
Constituent: Chromium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



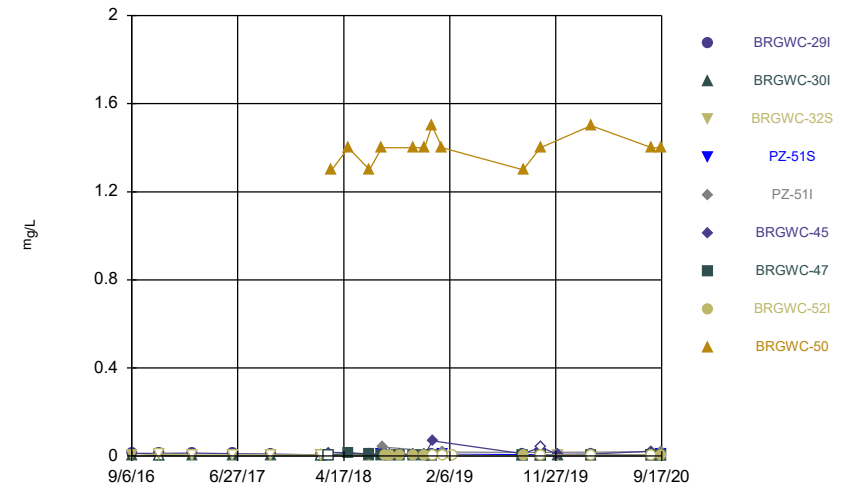
Constituent: Chromium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



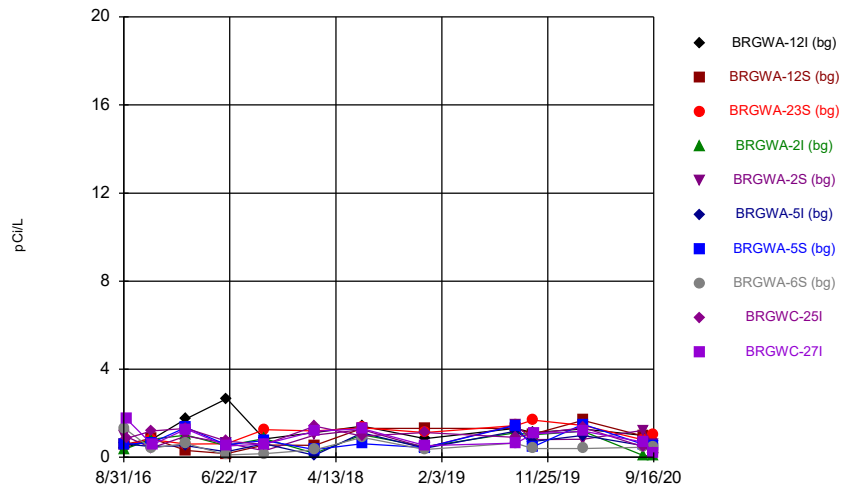
Constituent: Cobalt Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



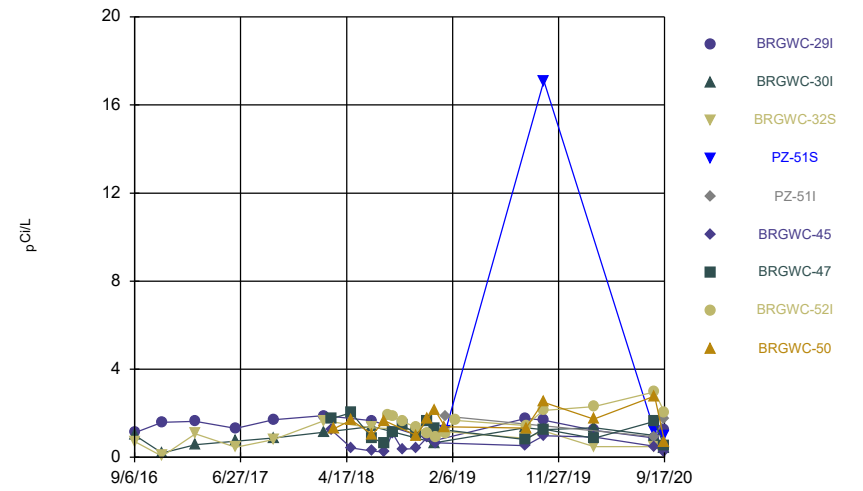
Constituent: Cobalt Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



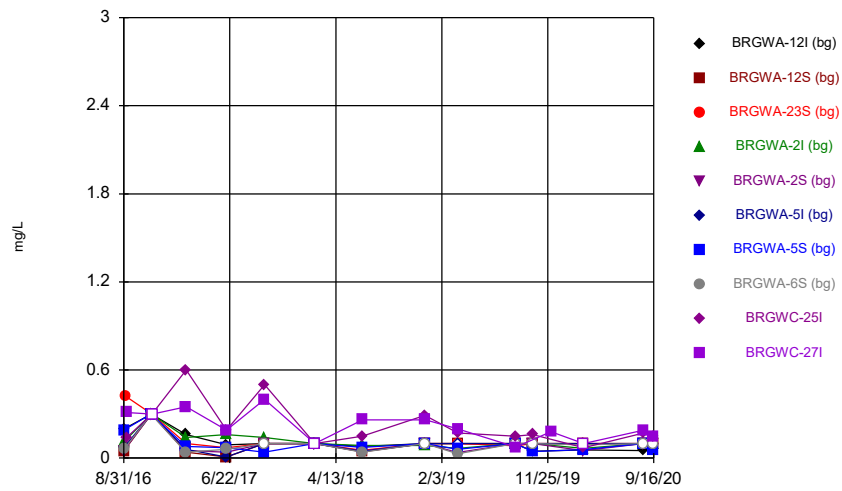
Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



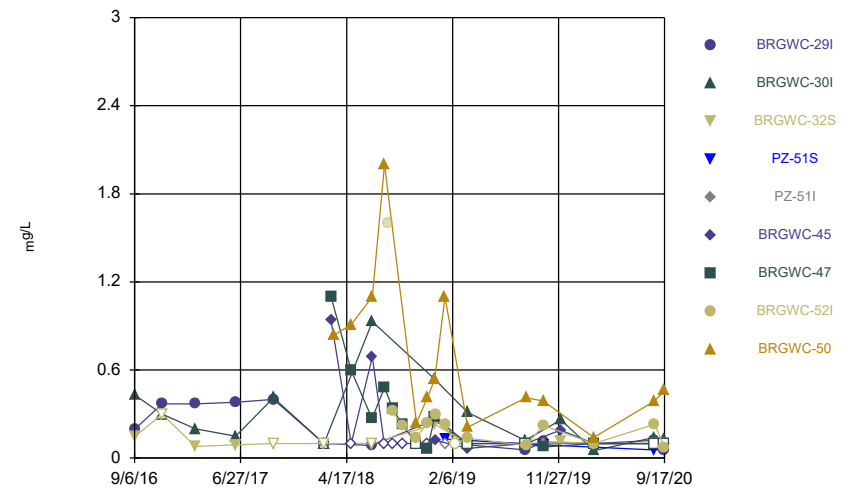
Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



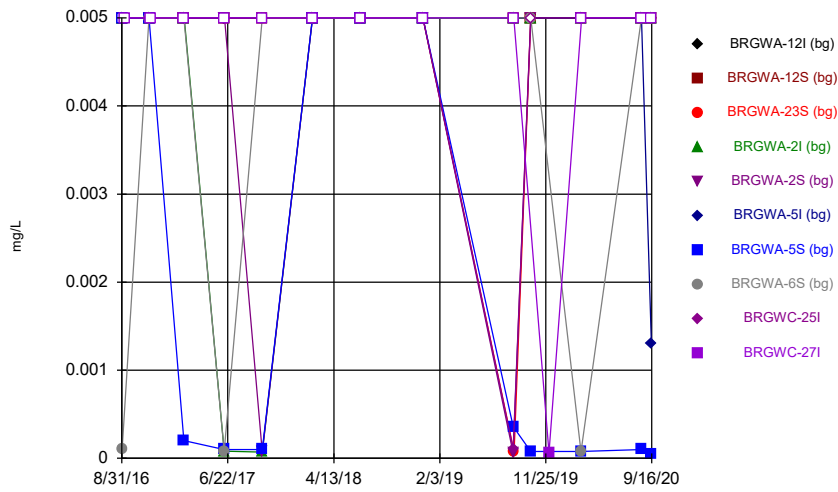
Constituent: Fluoride Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



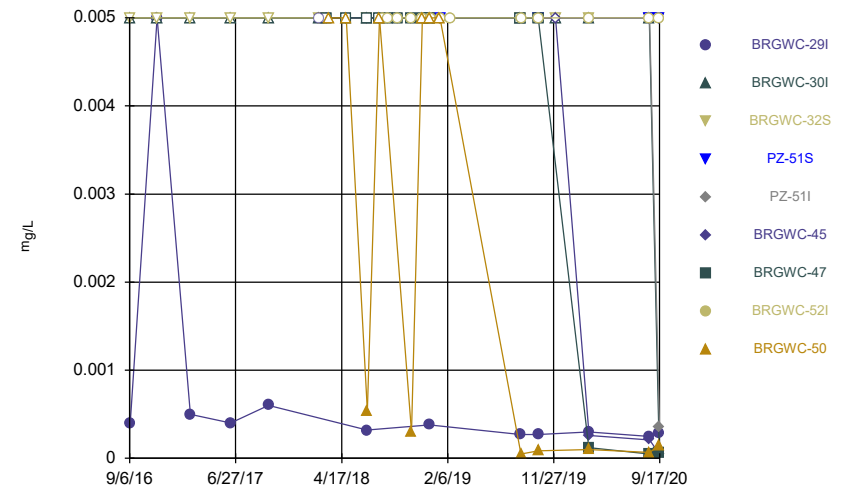
Constituent: Fluoride Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



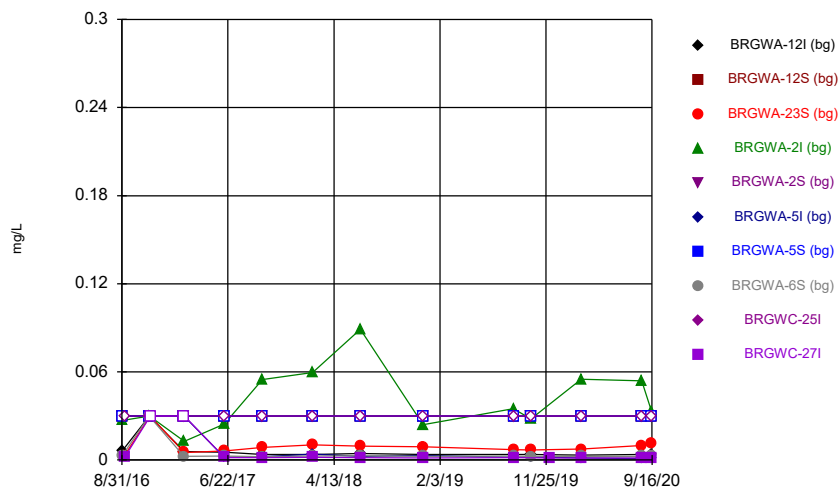
Constituent: Lead Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



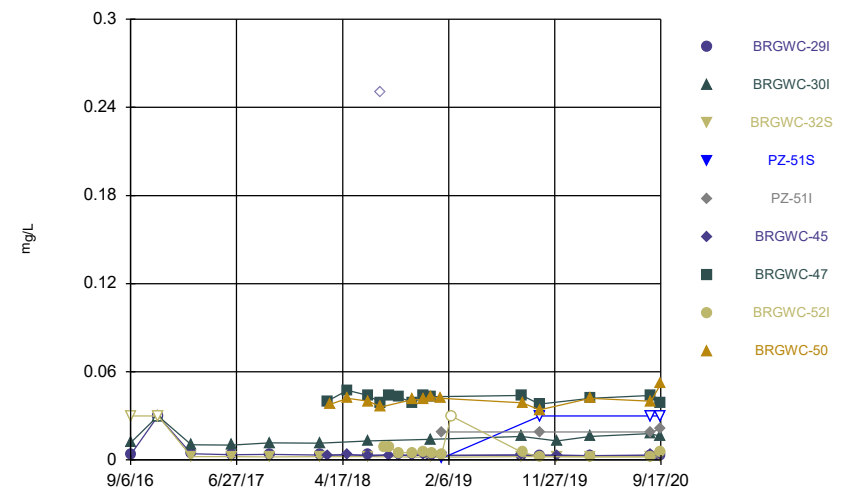
Constituent: Lead Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



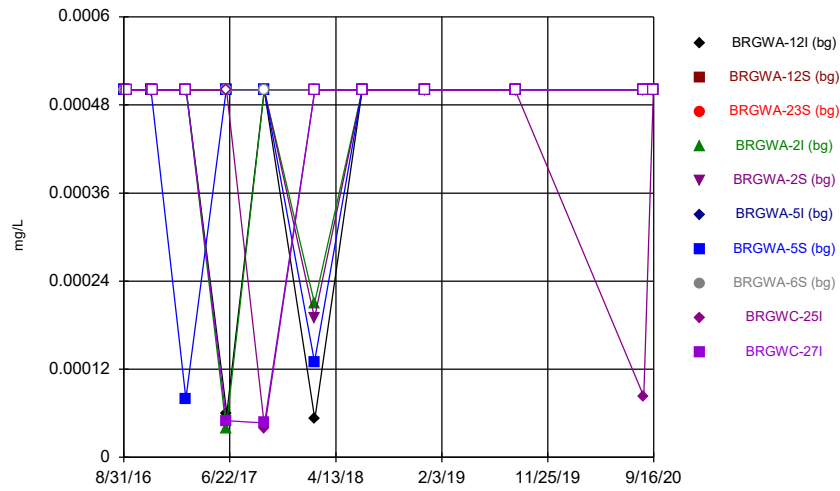
Constituent: Lithium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



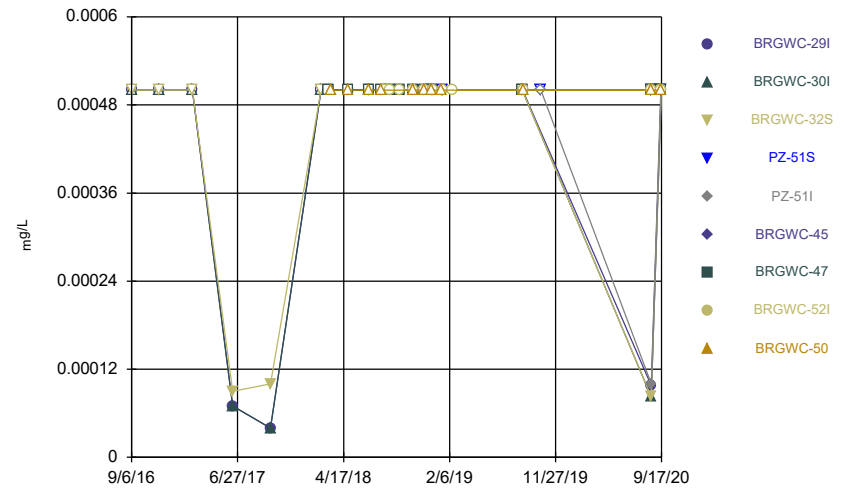
Constituent: Lithium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



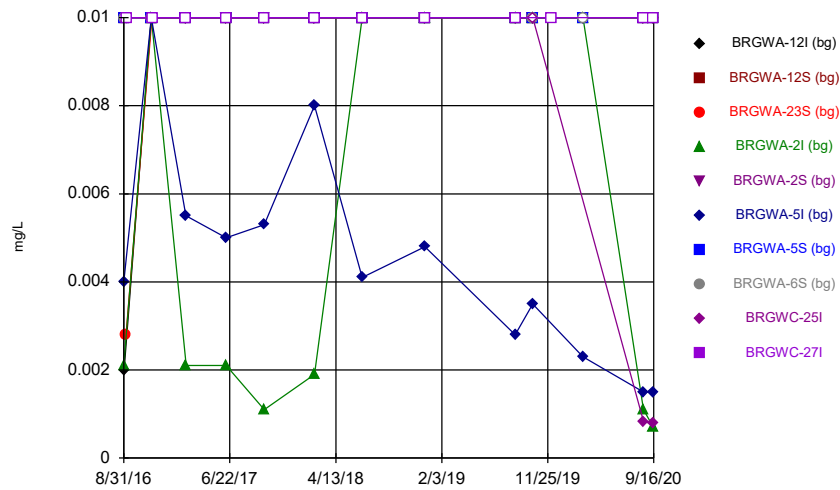
Constituent: Mercury Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



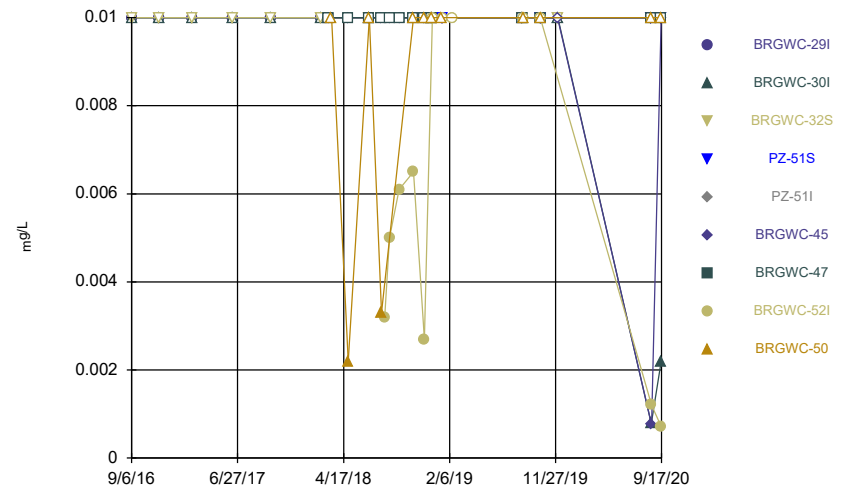
Constituent: Mercury Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



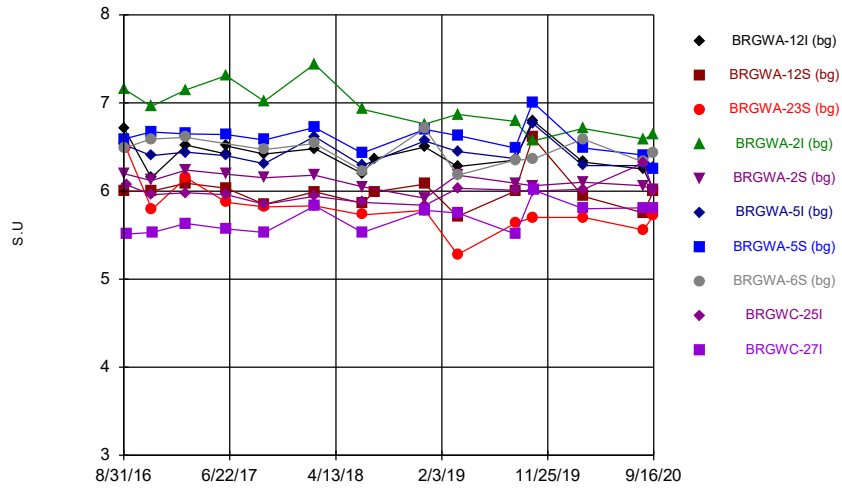
Constituent: Molybdenum Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



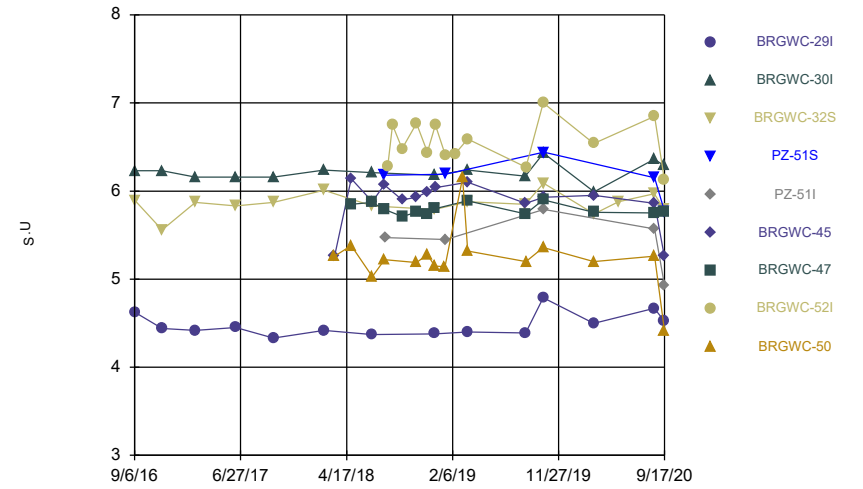
Constituent: Molybdenum Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



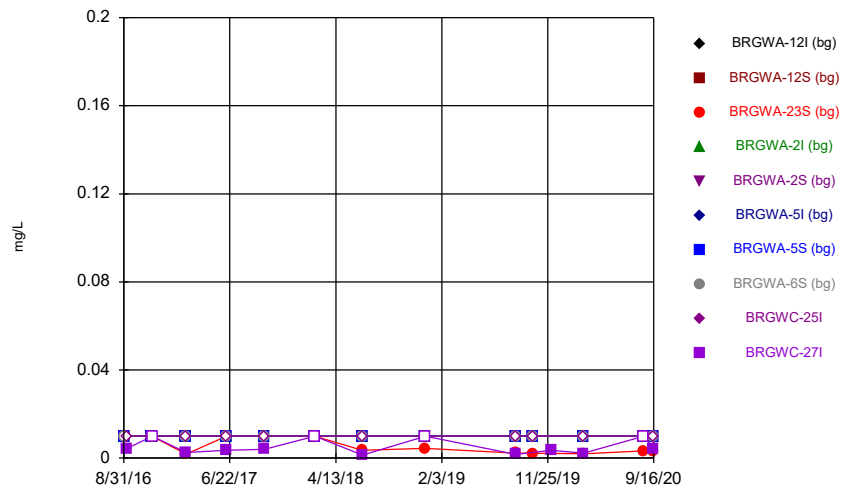
Constituent: pH, Field Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



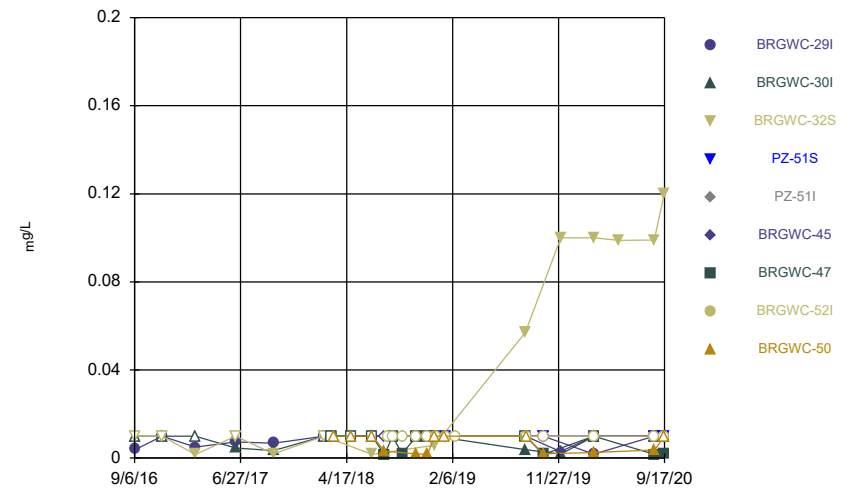
Constituent: pH, Field Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



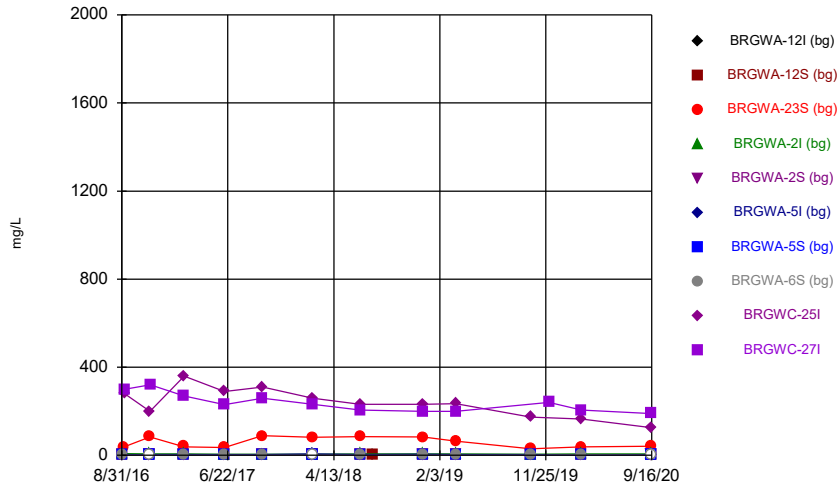
Constituent: Selenium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



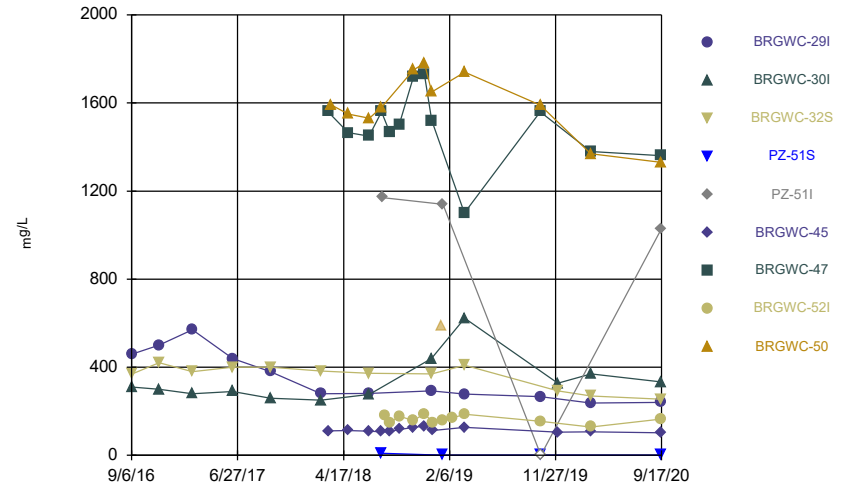
Constituent: Selenium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



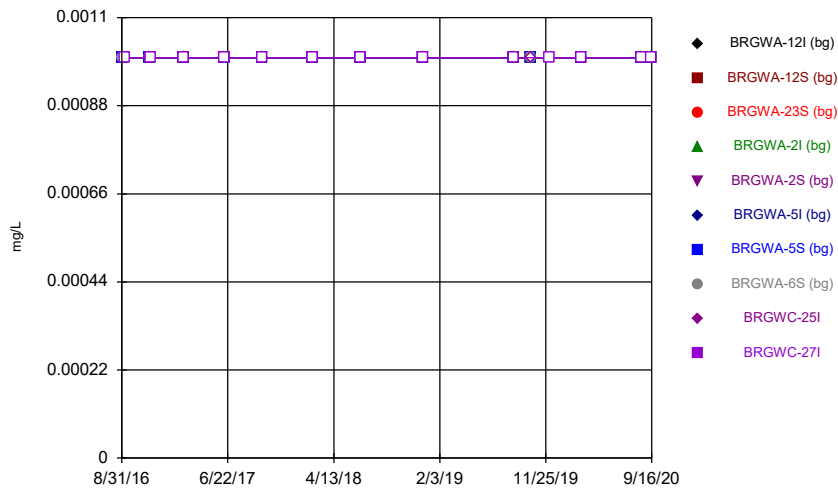
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



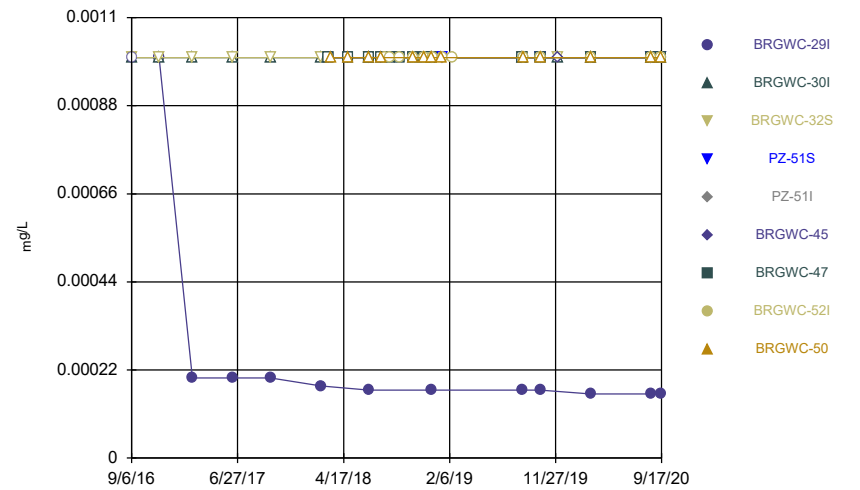
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



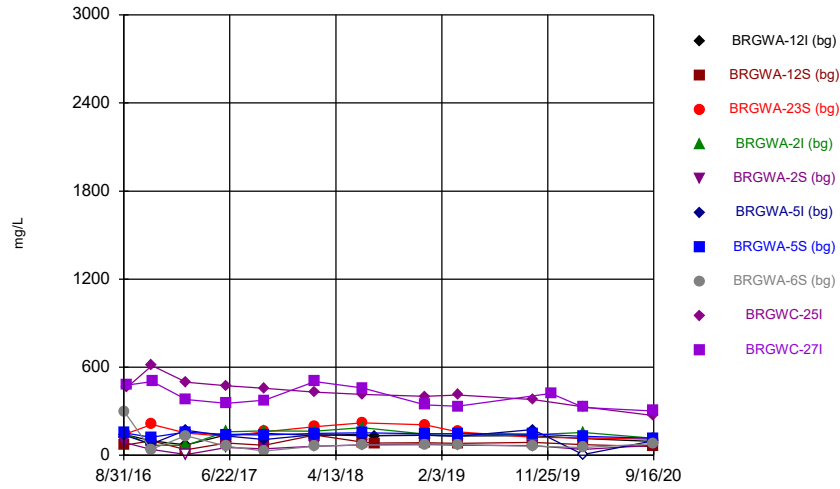
Constituent: Thallium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



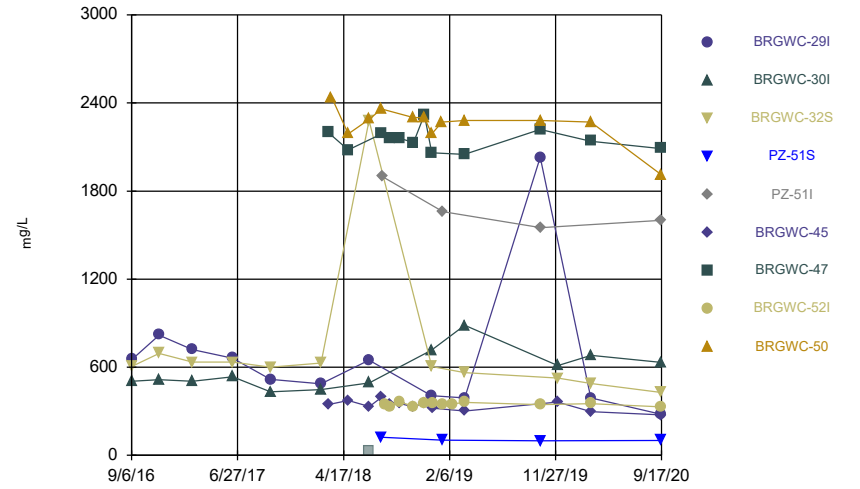
Constituent: Thallium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

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

	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

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

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

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

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

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

	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

	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

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

	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

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

	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

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

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

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

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

	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				<0.01	<0.01	<0.01	<0.01		
9/1/2016	<0.01	<0.01						<0.01	
9/6/2016			<0.01						
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			
11/17/2016			<0.01 (J)						<0.01
2/20/2017						<0.01	<0.01	<0.01	
2/21/2017	<0.01	<0.01	0.0018 (J)	<0.01	<0.01				<0.01
6/12/2017				<0.01		<0.01	<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	<0.01	<0.01	<0.01	<0.01	<0.01	
9/27/2017									<0.01
2/13/2018				<0.01	<0.01	<0.01	<0.01	<0.01	
2/14/2018	<0.01	<0.01	<0.01						<0.01
6/26/2018	<0.01	<0.01	0.0036 (J)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/18/2018	<0.01	<0.01	0.0044 (J)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/27/2019	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/29/2019			0.0023 (J)						
10/15/2019	<0.01	<0.01	0.0022 (J)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/3/2020	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	
3/4/2020			0.0019 (J)						<0.01
8/18/2020	<0.01	<0.01	0.0033 (J)	<0.01	<0.01	<0.01	<0.01	<0.01	
8/19/2020									<0.01
9/15/2020	<0.01	<0.01	0.0028 (J)	<0.01	<0.01	<0.01	<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

	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

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

	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

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

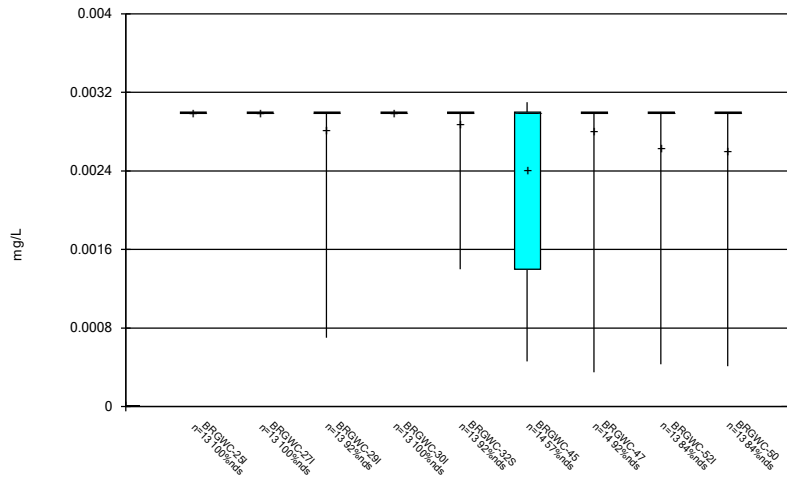
Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

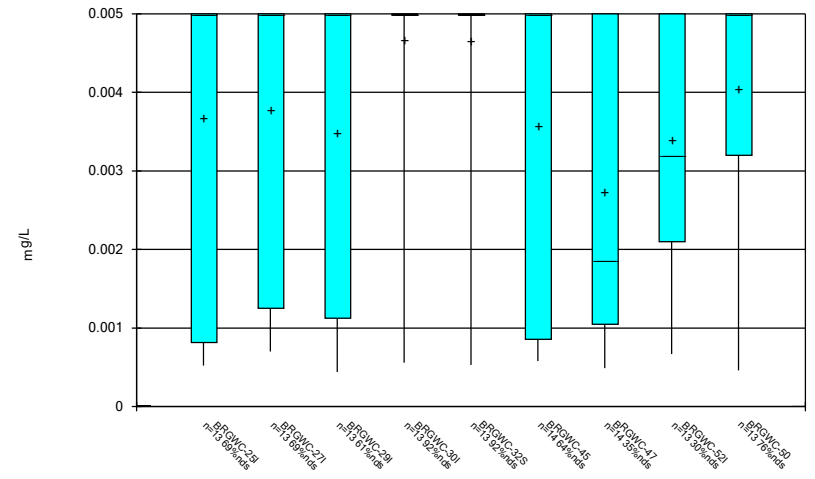
FIGURE B.

Box & Whiskers Plot



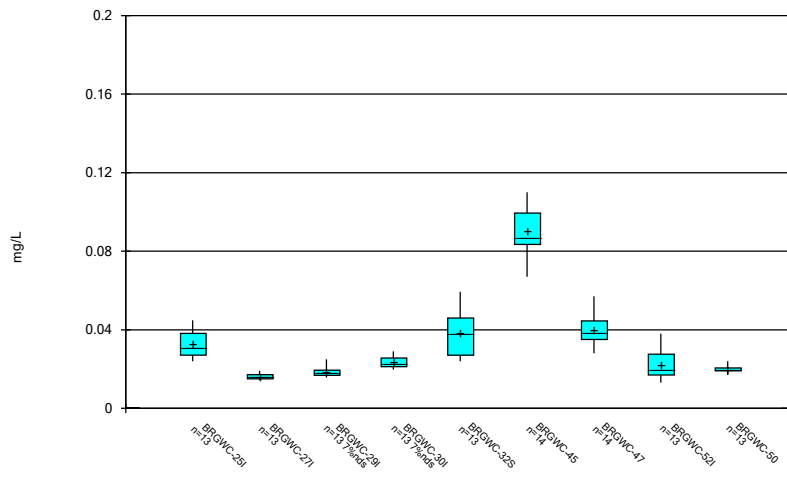
Constituent: Antimony Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



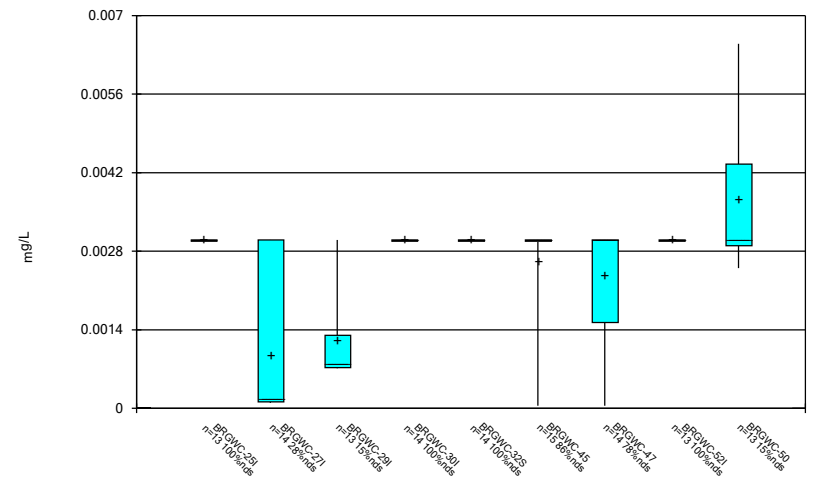
Constituent: Arsenic Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



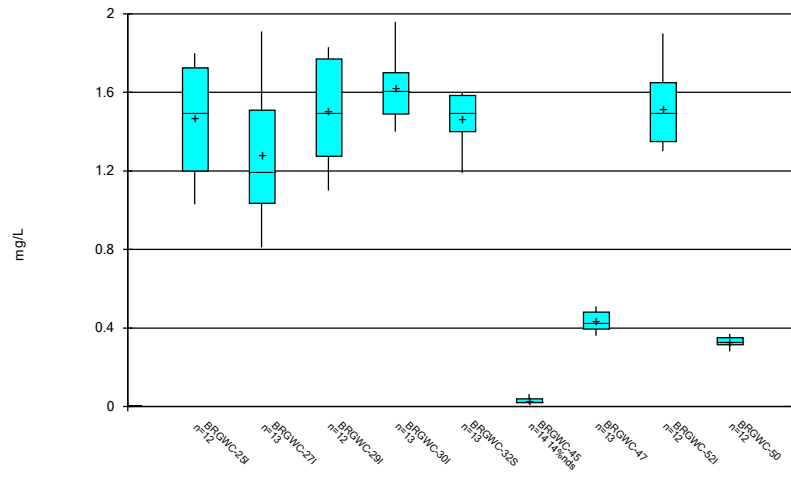
Constituent: Barium Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



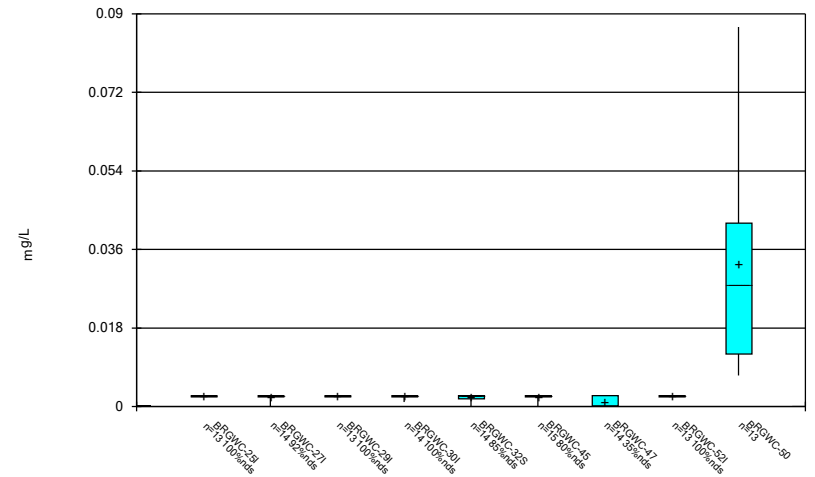
Constituent: Beryllium Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



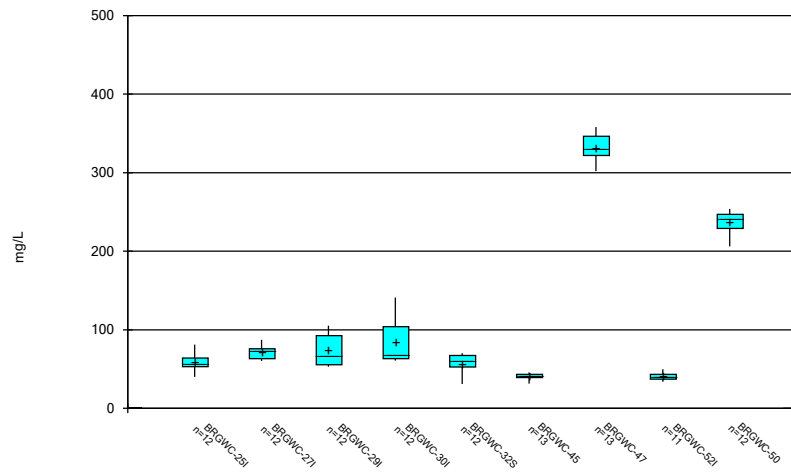
Constituent: Boron Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



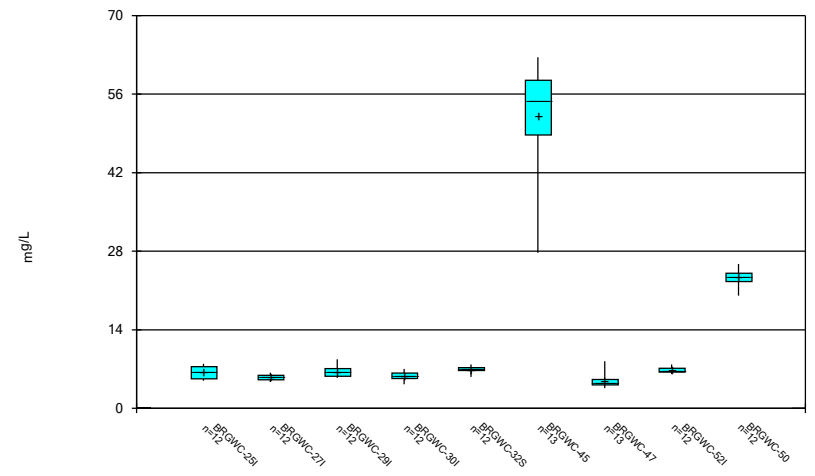
Constituent: Cadmium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



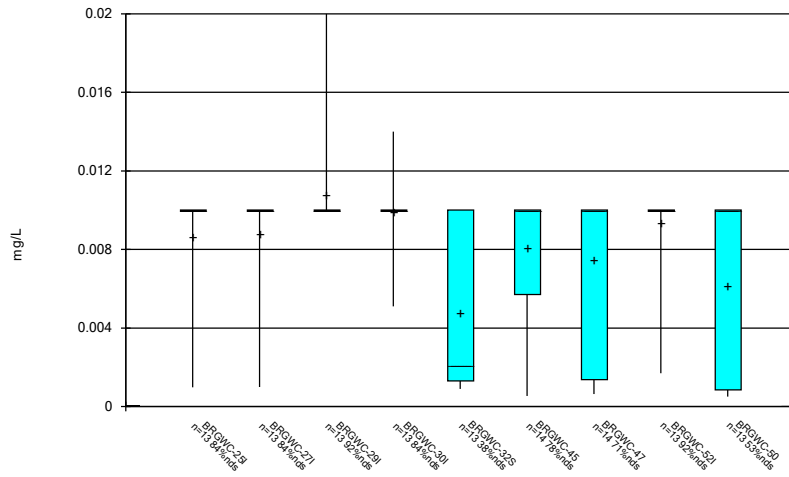
Constituent: Calcium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



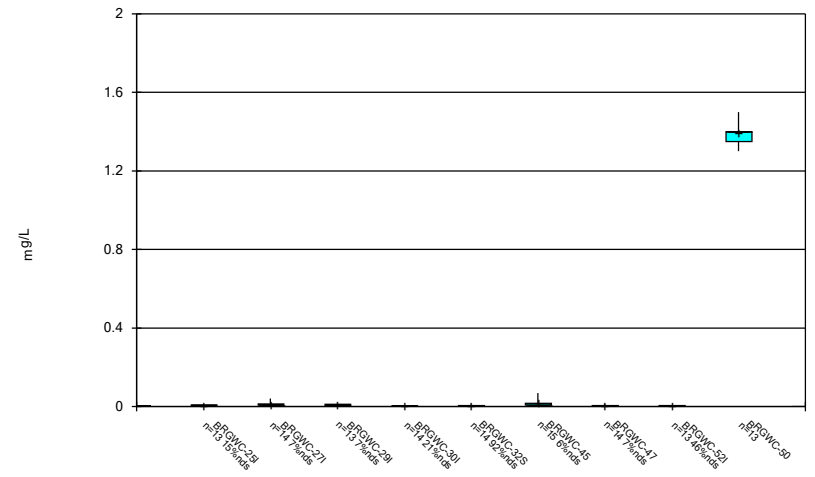
Constituent: Chloride, Total Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



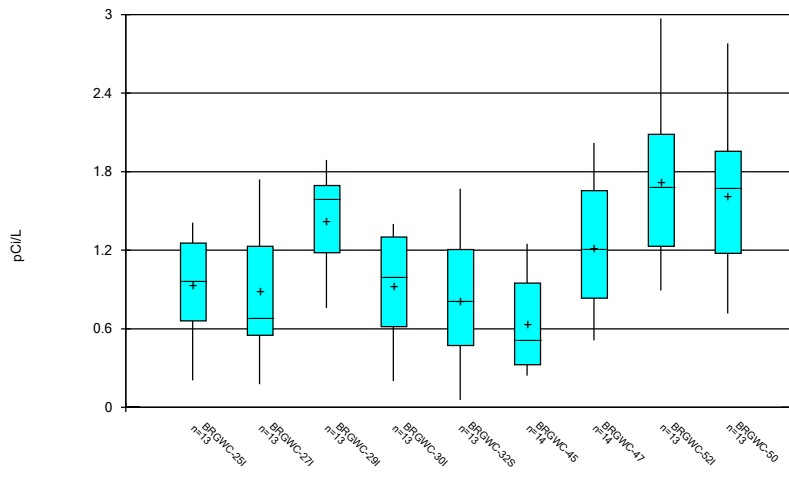
Constituent: Chromium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



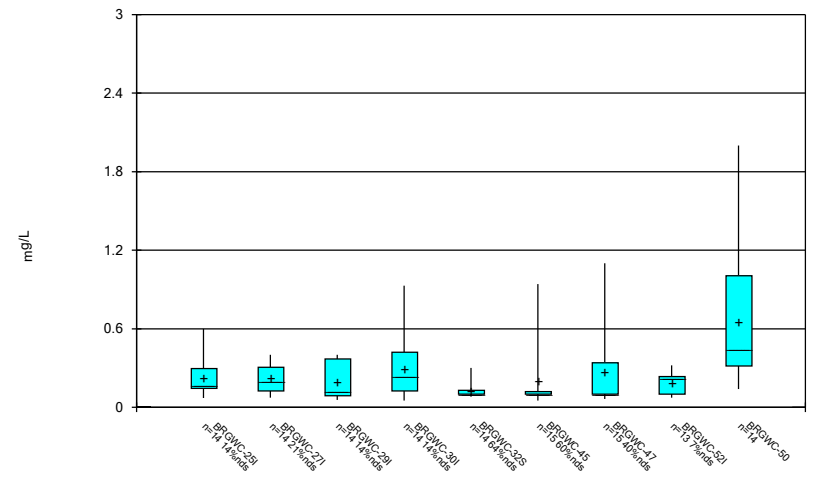
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



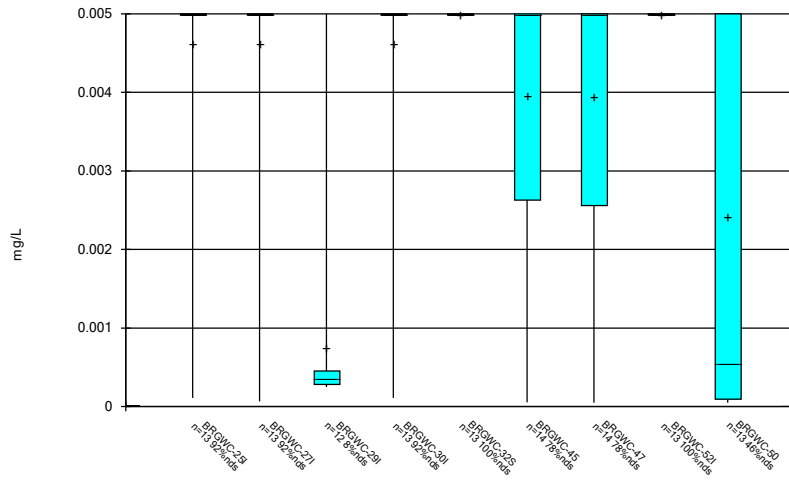
Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



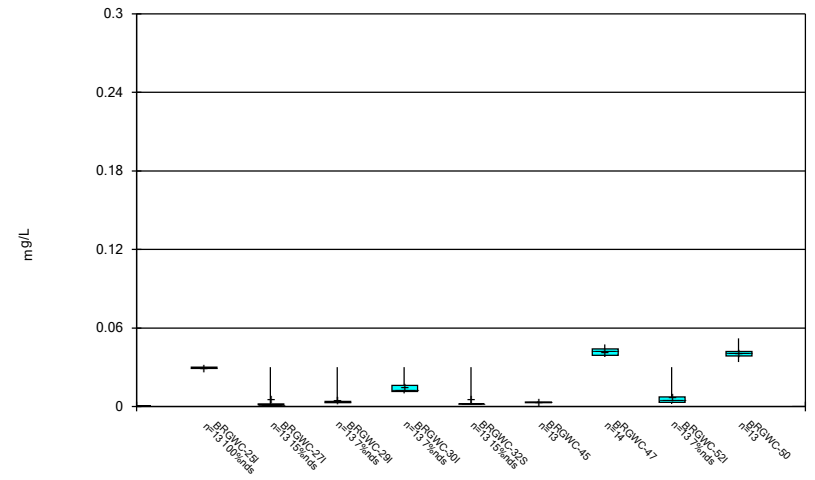
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



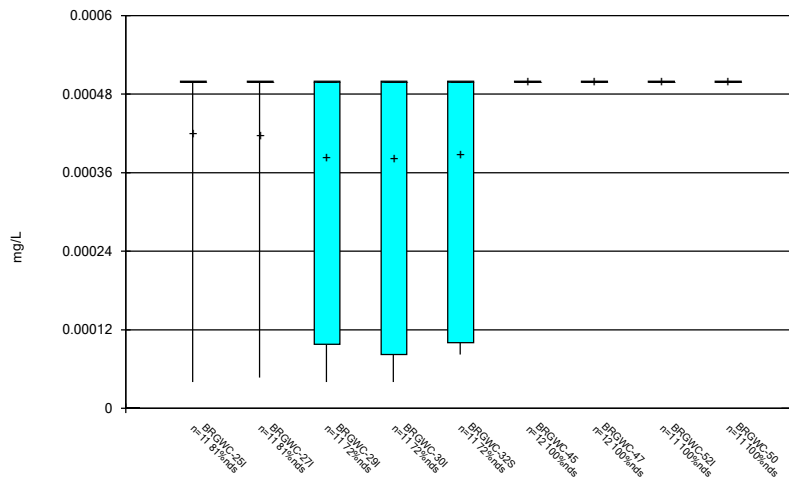
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



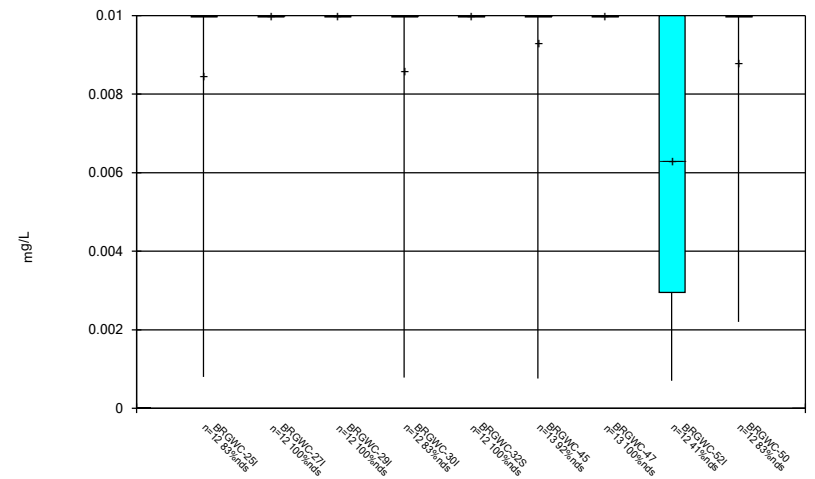
Constituent: Lithium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



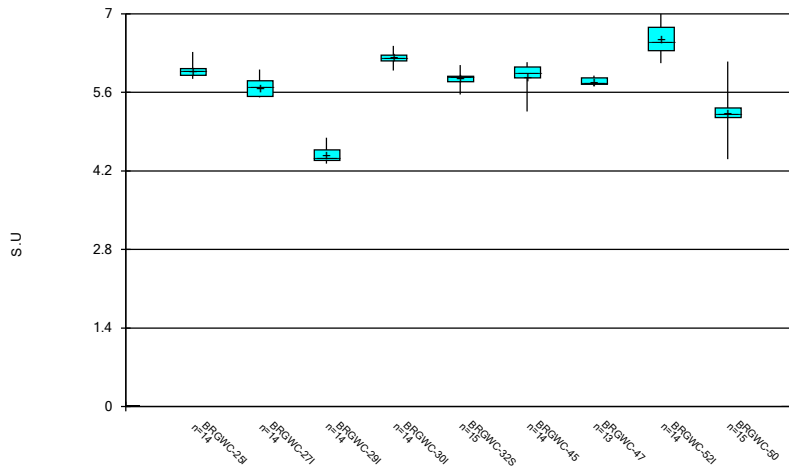
Constituent: Mercury Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



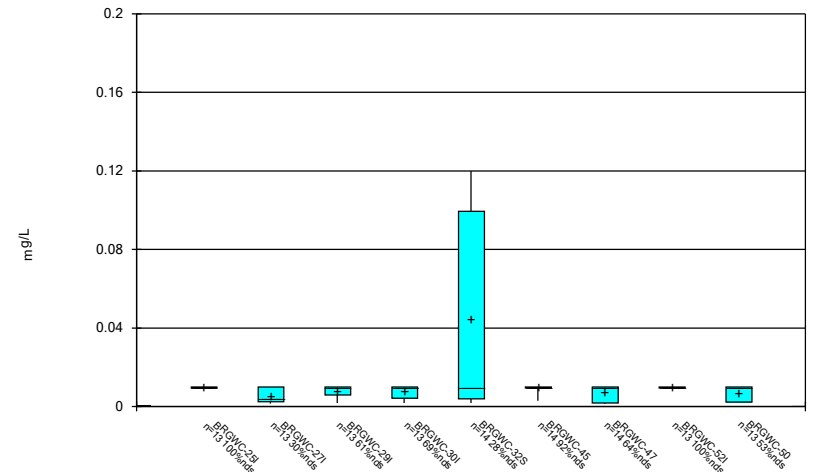
Constituent: Molybdenum Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



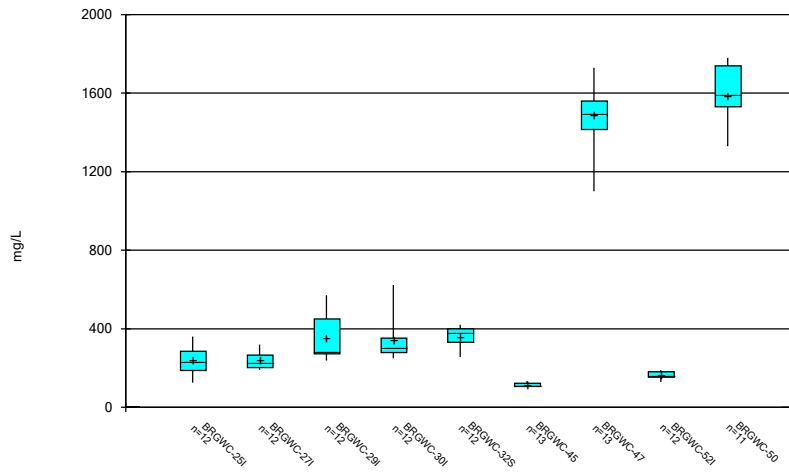
Constituent: pH, Field Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



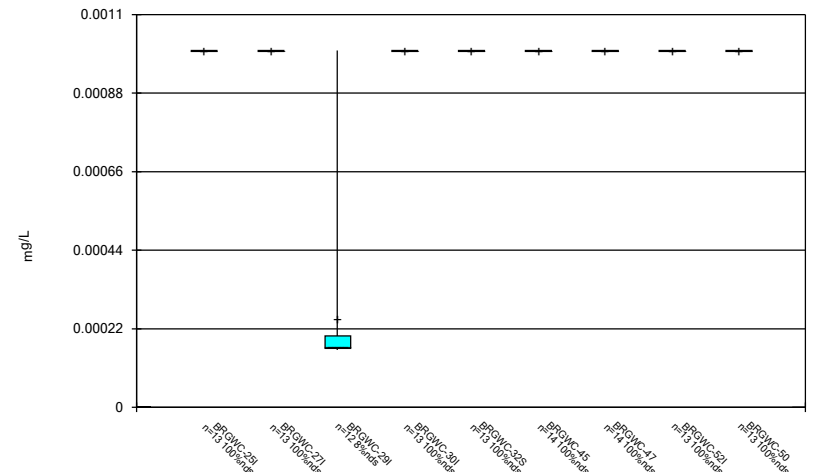
Constituent: Selenium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



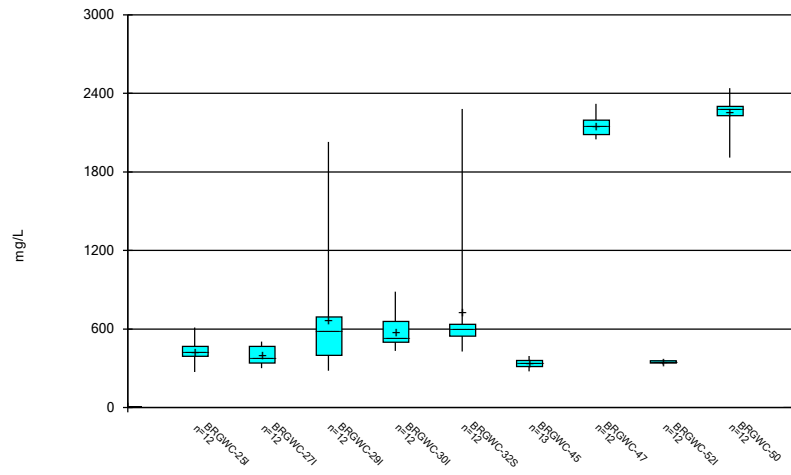
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

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.

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

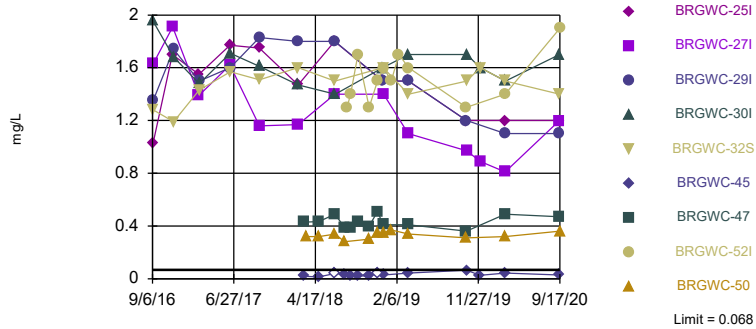
Federal Interwell Prediction Limit Summary - All Results

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

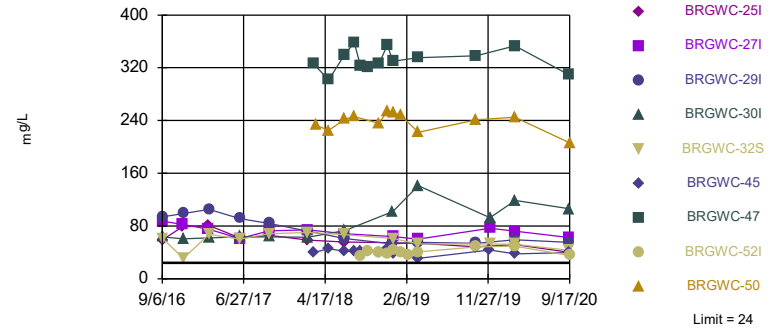


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 96 background values. 57.29% NDs. Annual per-constituent alpha = 0.003776. Individual comparison alpha = 0.0002102 (1 of 2). Comparing 9 points to limit.

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

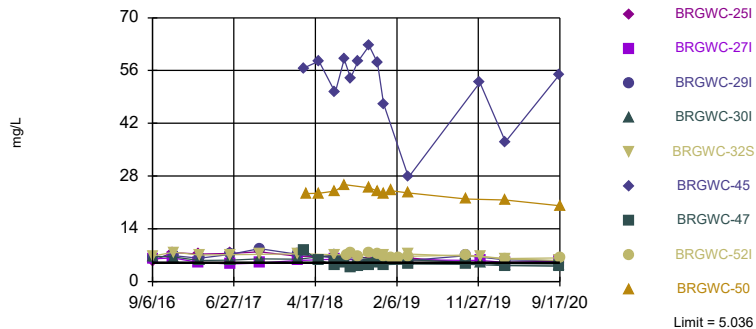


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 98 background values. 6.122% NDs. Annual per-constituent alpha = 0.003619. Individual comparison alpha = 0.0002014 (1 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

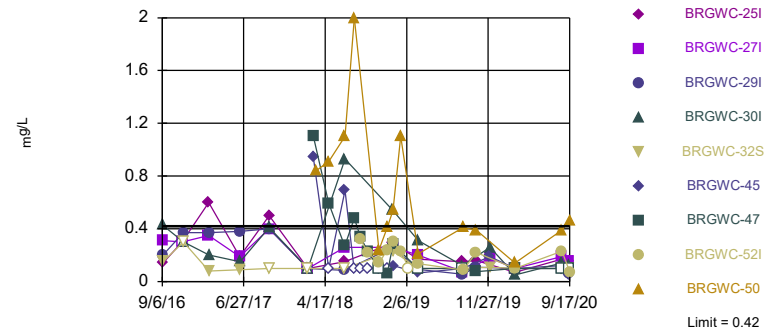


Background Data Summary (based on square root transformation): Mean=1.742, Std. Dev.=0.2583, n=98. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.966, critical = 0.966. Kappa = 1.943 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0008358. 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

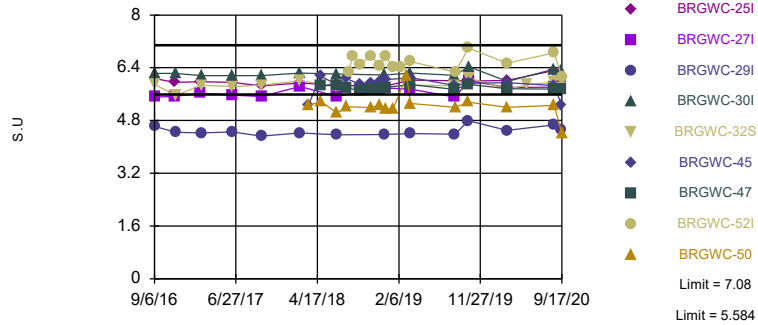
	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	0.14 (J)	0.31	0.2 (J)	0.15 (J)				
11/15/2016								
11/16/2016								
11/17/2016	<0.3 (JB)							
11/18/2016		<0.3 (JB)						
11/21/2016			0.37	<0.3 (J)				
2/20/2017								
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

	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)

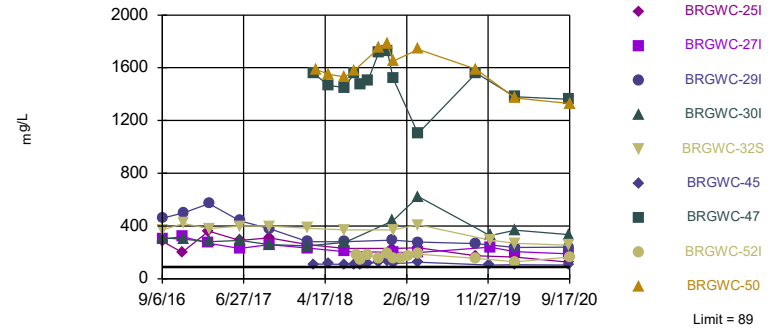
Exceeds Limits: BRGWC-291, BRGWC-45, BRGWC-50
 Prediction Limit
 Interwell Parametric



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

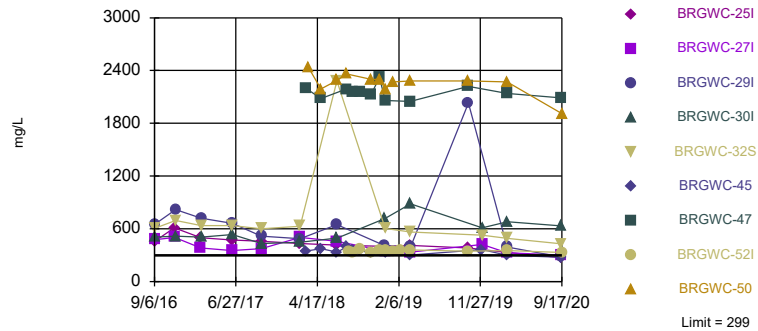
Exceeds Limit: BRGWC-251, BRGWC-271, BRGWC-291, BRGWC-301, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-52I, ...
 Prediction Limit
 Interwell Non-parametric



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

	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
Boron (mg/L)	BRGWC-27I	-0.2108	-47	-43	Yes	13	0	n/a	n/a	0.01	NP
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
Calcium (mg/L)	BRGWC-25I	-6.82	-52	-38	Yes	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-27I	-4.805	-30	-38	No	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
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

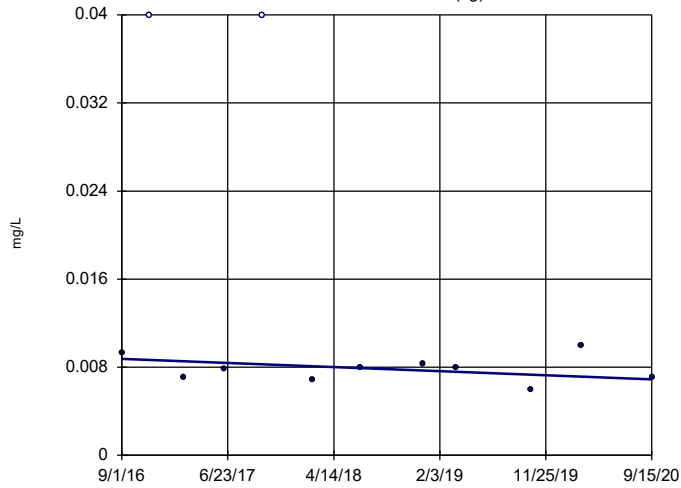
Trend Test Summary - All Results

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
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
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
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)	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
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
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
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	-50.85	-41	-38	Yes	12	0	n/a	n/a	0.01	NP
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)

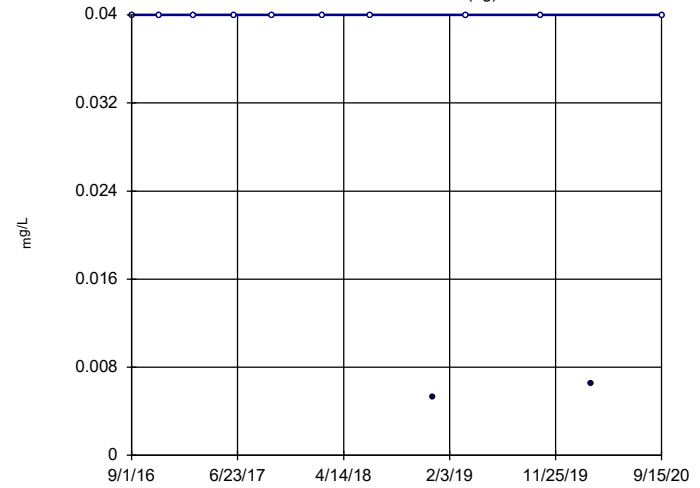


n = 12
 Slope = -0.0004579
 units per year.
 Mann-Kendall
 statistic = -13
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

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)

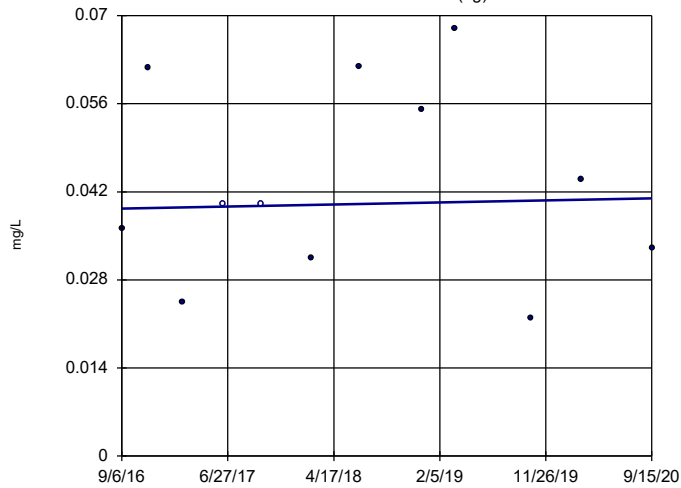


n = 12
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -11
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

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)

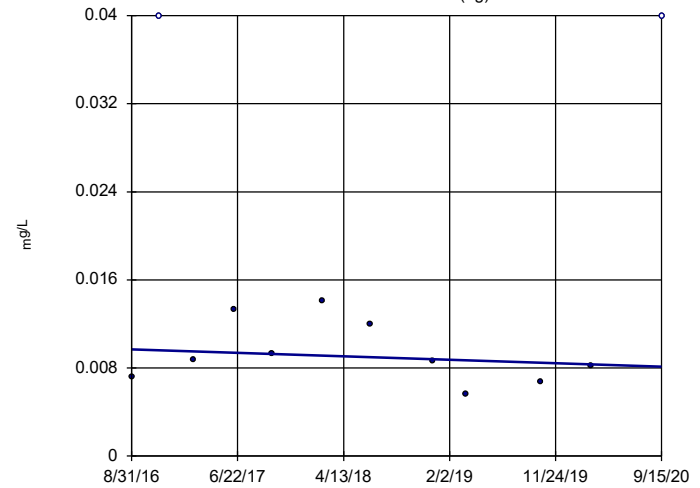


n = 12
 Slope = 0.0004028
 units per year.
 Mann-Kendall
 statistic = 3
 critical = 38
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

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

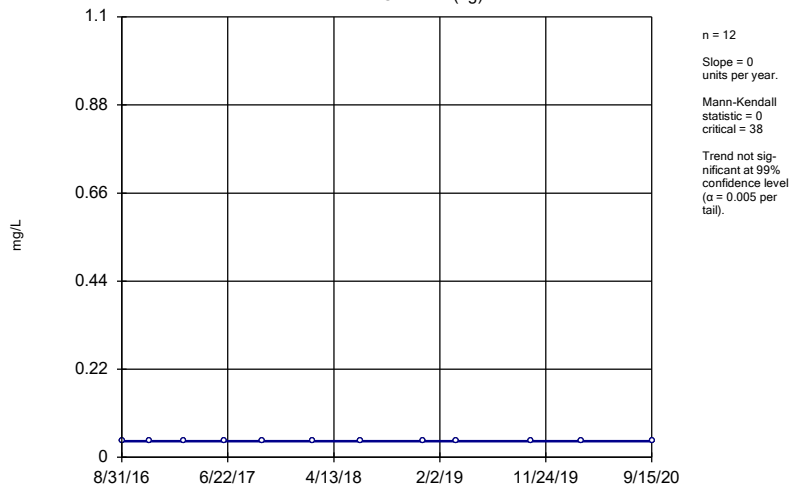
BRGWA-2I (bg)



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).

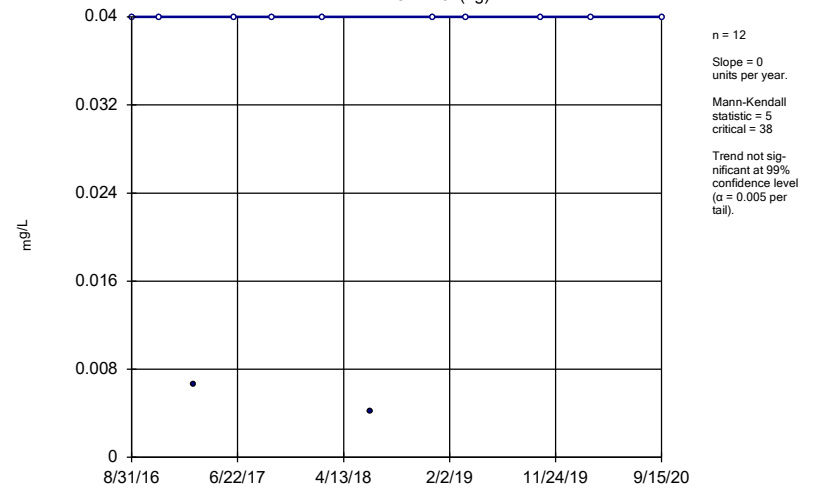
Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWA-2S (bg)



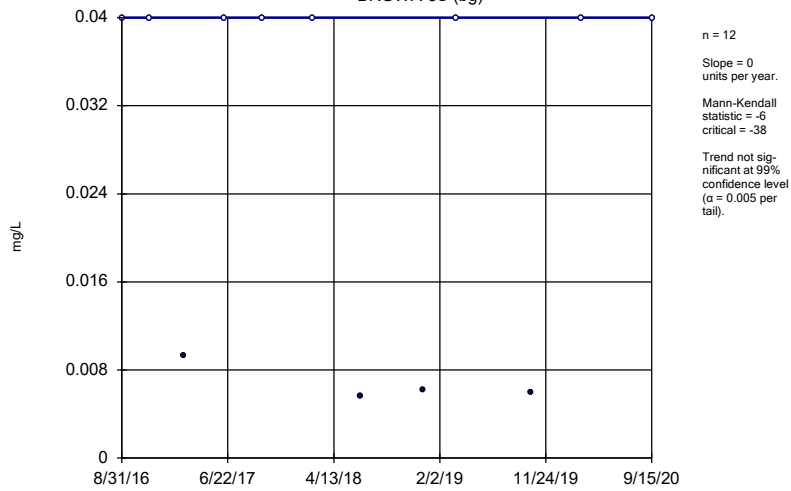
Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWA-5I (bg)



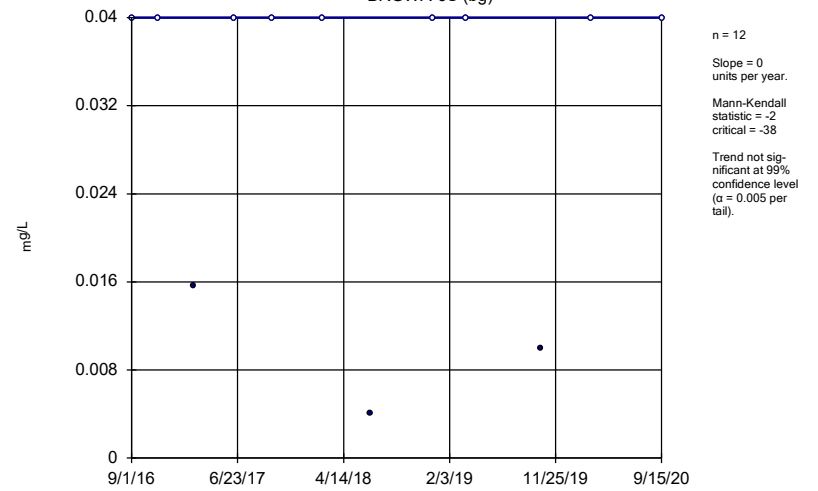
Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

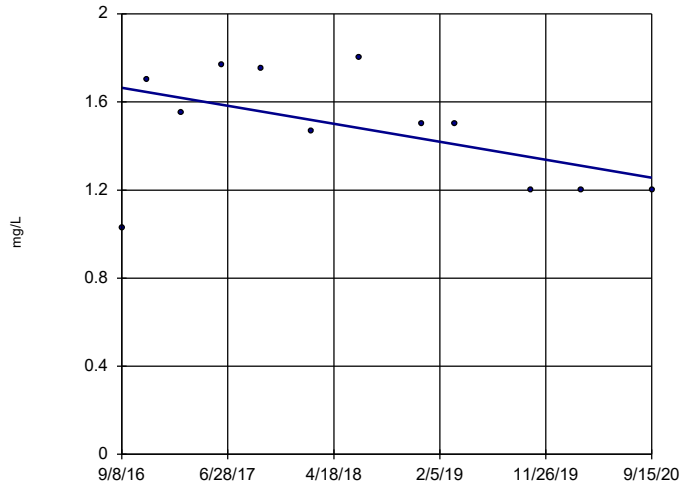
Sen's Slope Estimator
BRGWA-6S (bg)



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

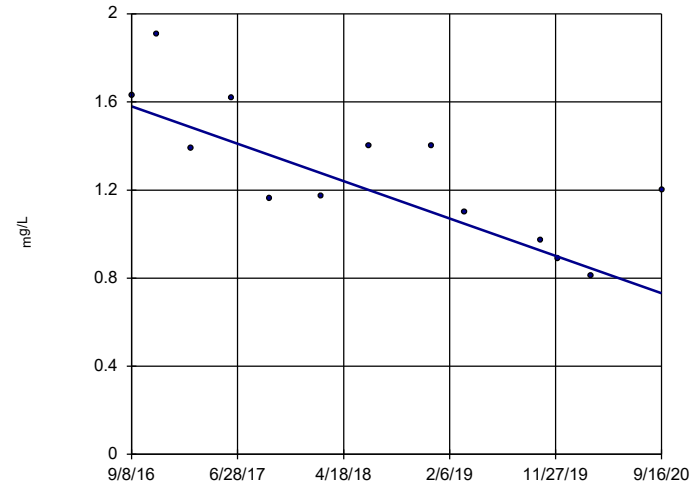


n = 12
 Slope = -0.1013
 units per year.
 Mann-Kendall
 statistic = -18
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

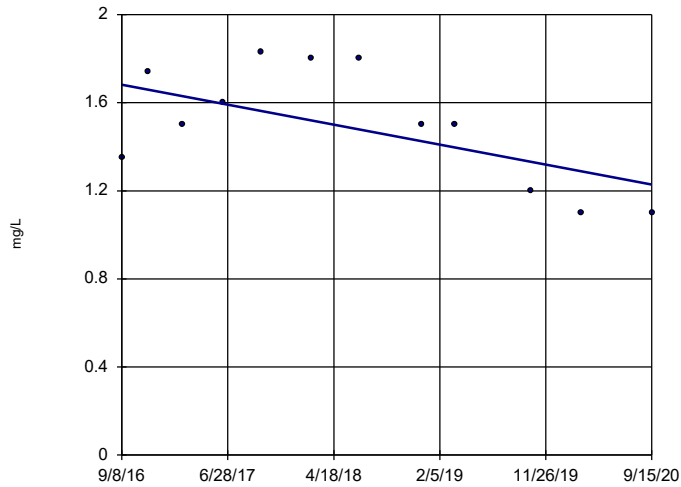


n = 13
 Slope = -0.2108
 units per year.
 Mann-Kendall
 statistic = -47
 critical = -43
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

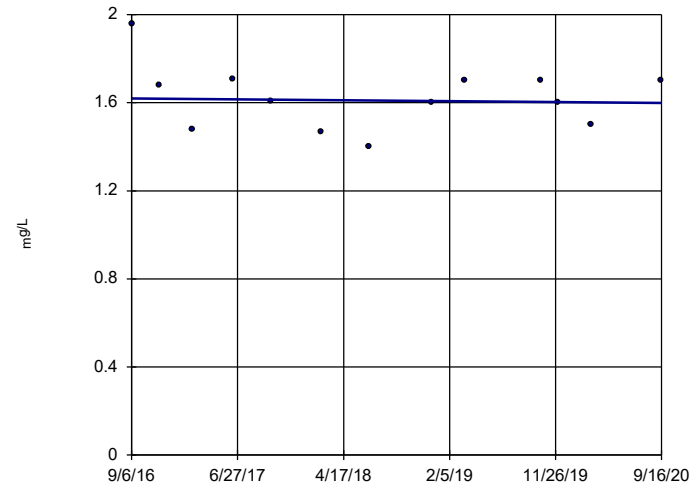


n = 12
 Slope = -0.1128
 units per year.
 Mann-Kendall
 statistic = -25
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

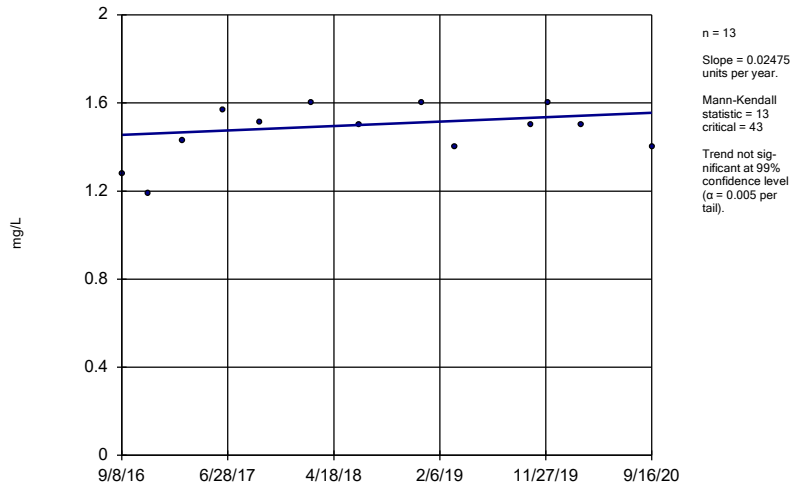
BRGWC-30I



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).

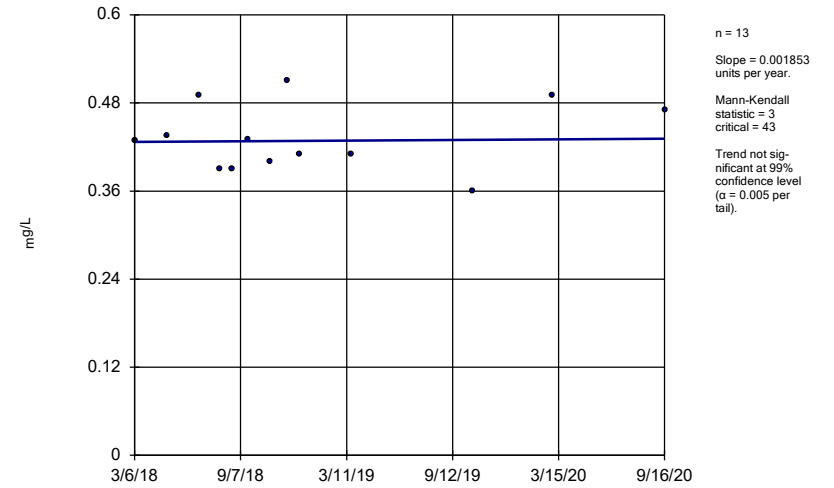
Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-32S



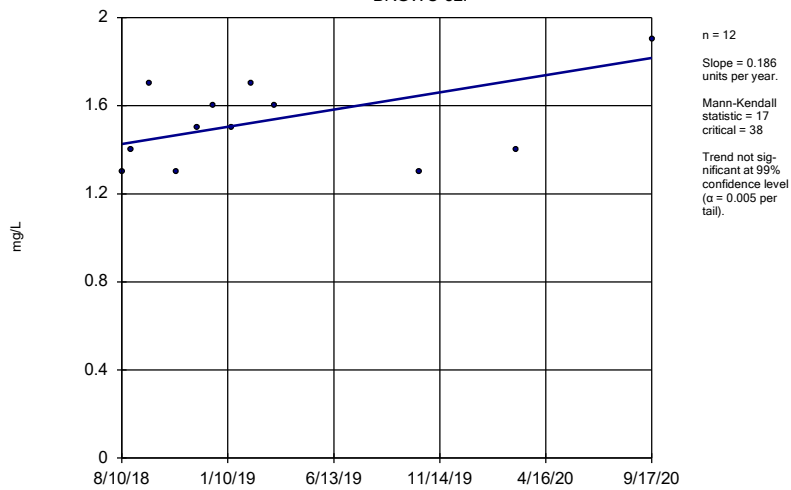
Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-47



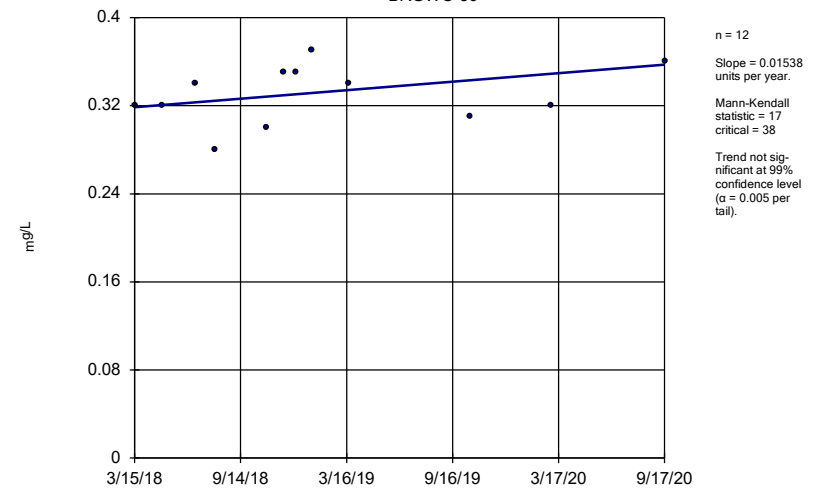
Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

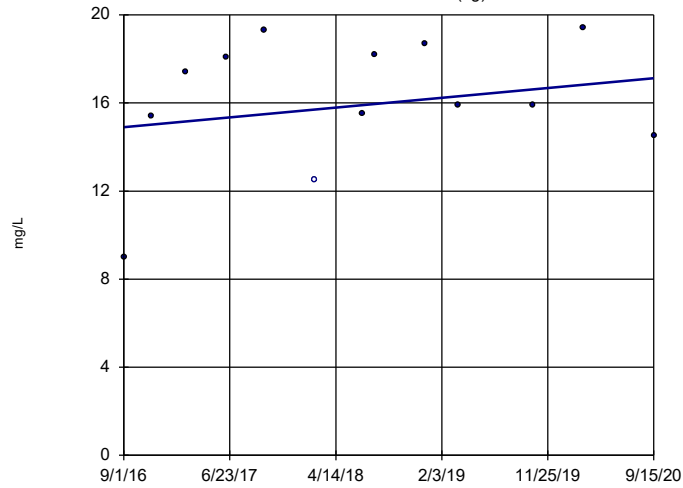
Sen's Slope Estimator
BRGWC-50



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-12I (bg)

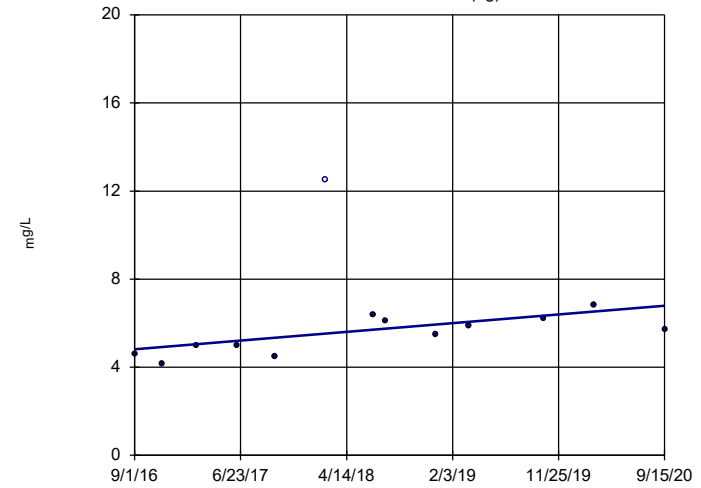


n = 13
 Slope = 0.5525
 units per year.
 Mann-Kendall
 statistic = 19
 critical = 43
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-12S (bg)

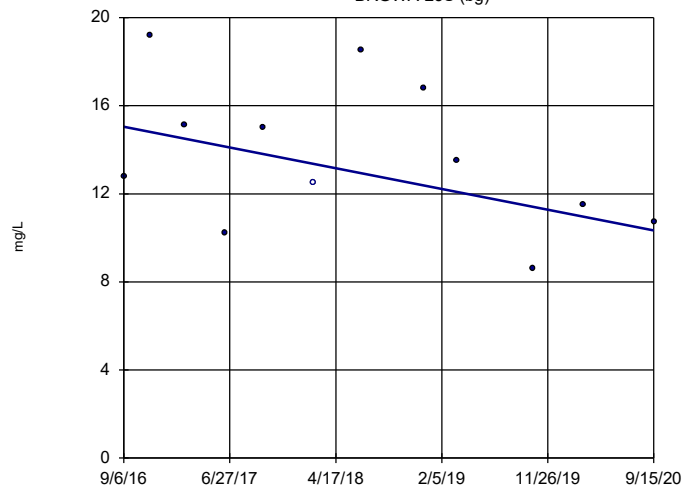


n = 13
 Slope = 0.4903
 units per year.
 Mann-Kendall
 statistic = 32
 critical = 43
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-23S (bg)

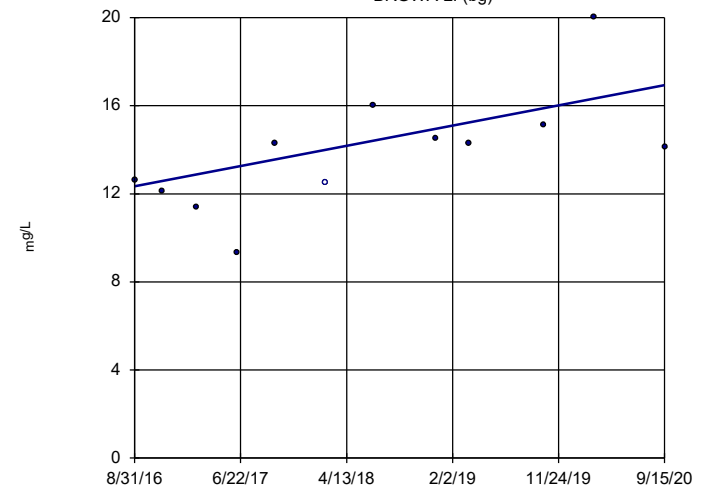


n = 12
 Slope = -1.169
 units per year.
 Mann-Kendall
 statistic = -22
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-2I (bg)

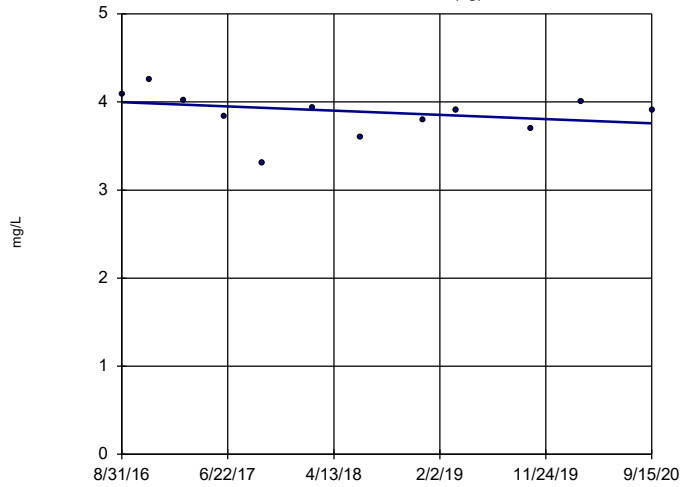


n = 12
 Slope = 1.137
 units per year.
 Mann-Kendall
 statistic = 29
 critical = 38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-2S (bg)



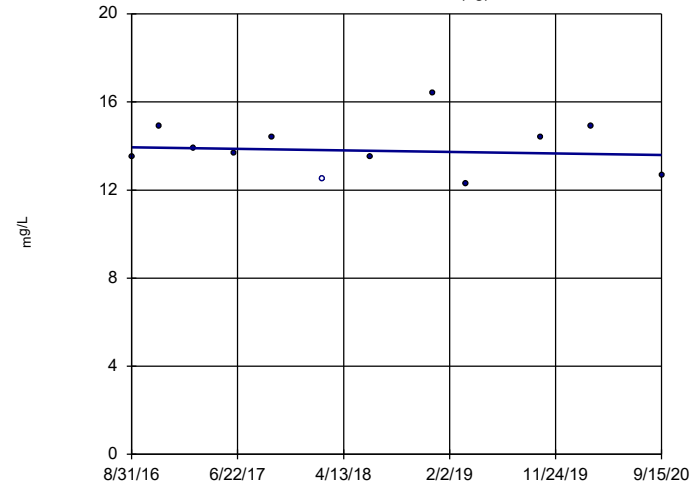
n = 12
 Slope = -0.05889
 units per year.
 Mann-Kendall
 statistic = -17
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)



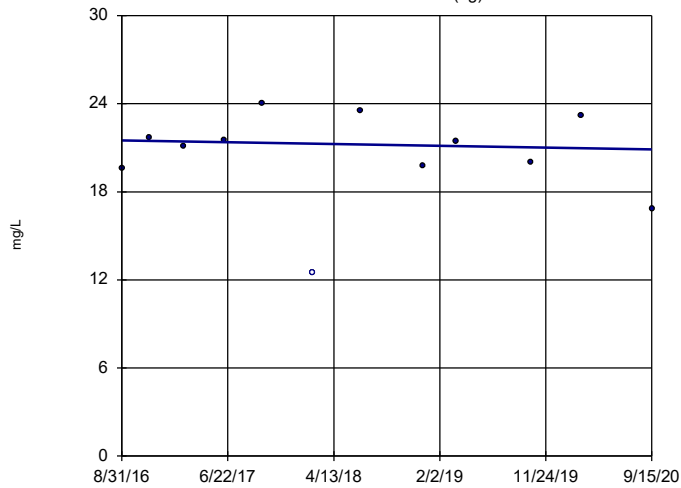
n = 12
 Slope = -0.08584
 units per year.
 Mann-Kendall
 statistic = -3
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)

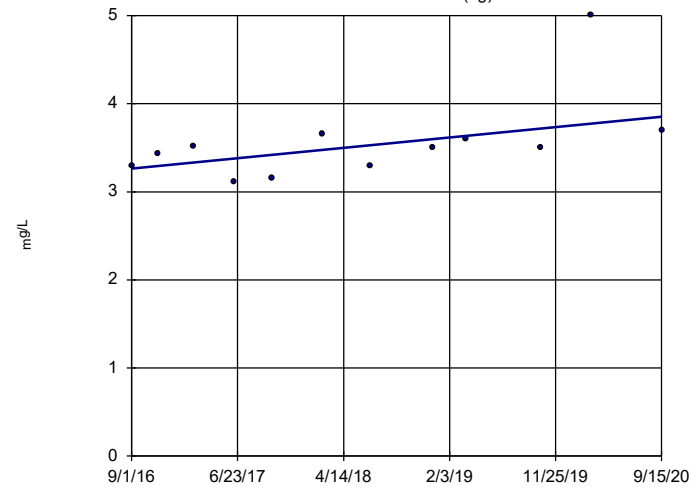


n = 12
 Slope = -0.153
 units per year.
 Mann-Kendall
 statistic = -4
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)

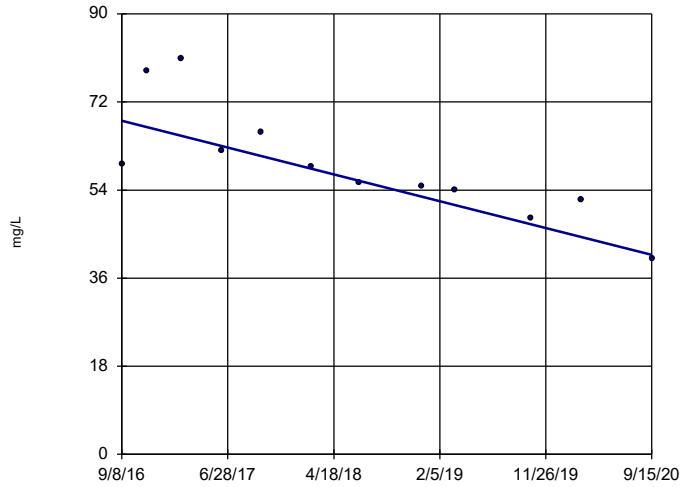


n = 12
 Slope = 0.1455
 units per year.
 Mann-Kendall
 statistic = 32
 critical = 38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

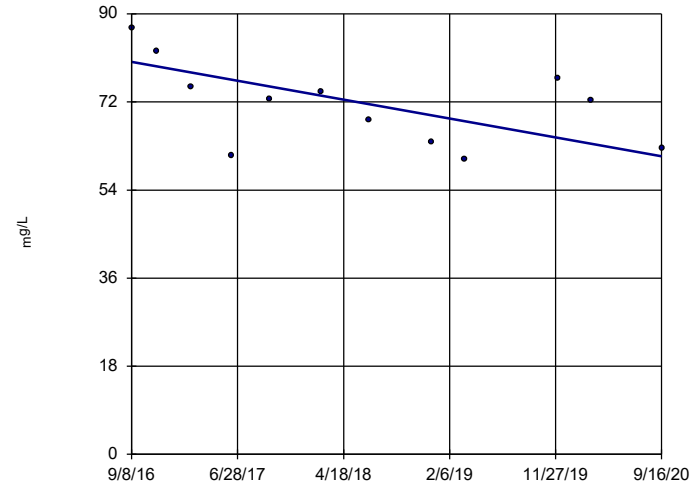


n = 12
 Slope = -6.82
 units per year.
 Mann-Kendall
 statistic = -52
 critical = -38
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-27I

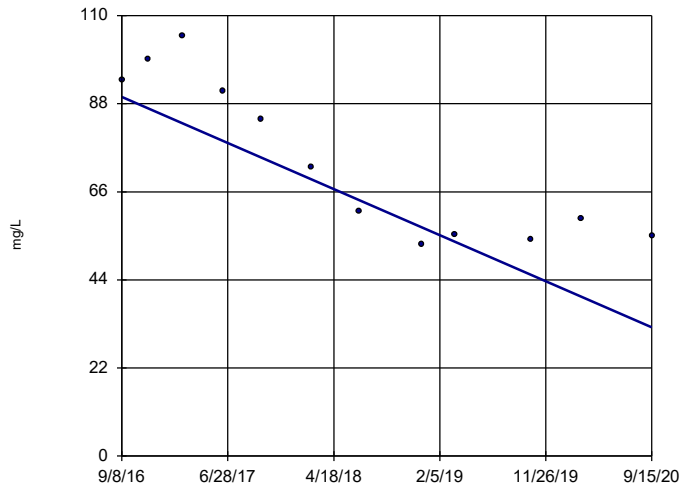


n = 12
 Slope = -4.805
 units per year.
 Mann-Kendall
 statistic = -30
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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-29I

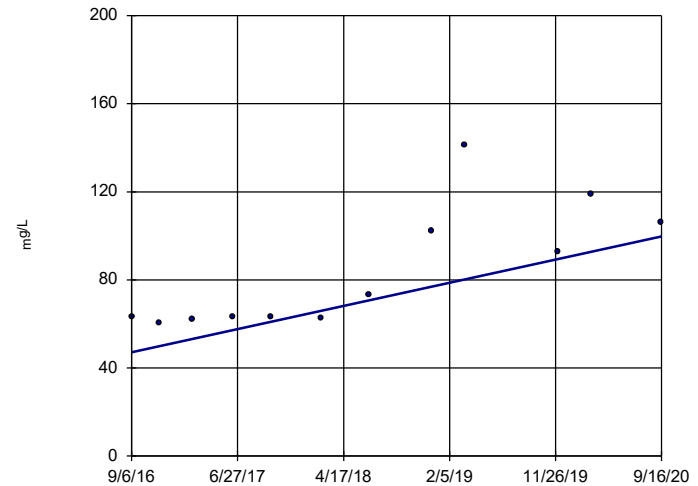


n = 12
 Slope = -14.31
 units per year.
 Mann-Kendall
 statistic = -46
 critical = -38
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

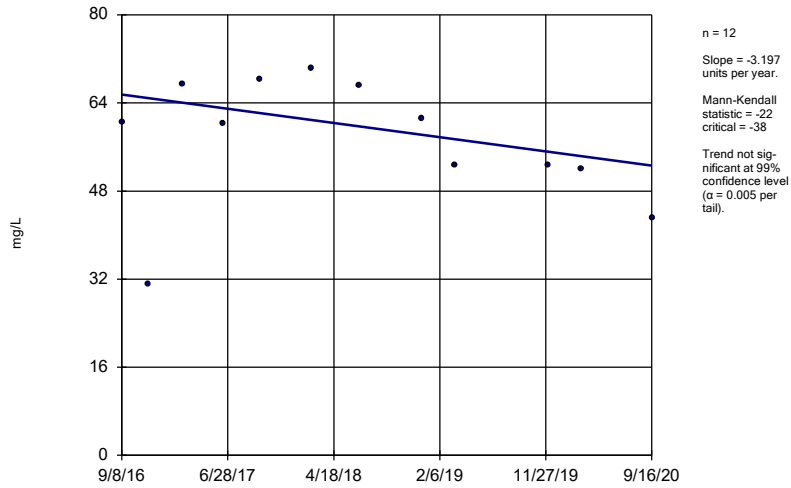
BRGWC-30I



n = 12
 Slope = 13.05
 units per year.
 Mann-Kendall
 statistic = 45
 critical = 38
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

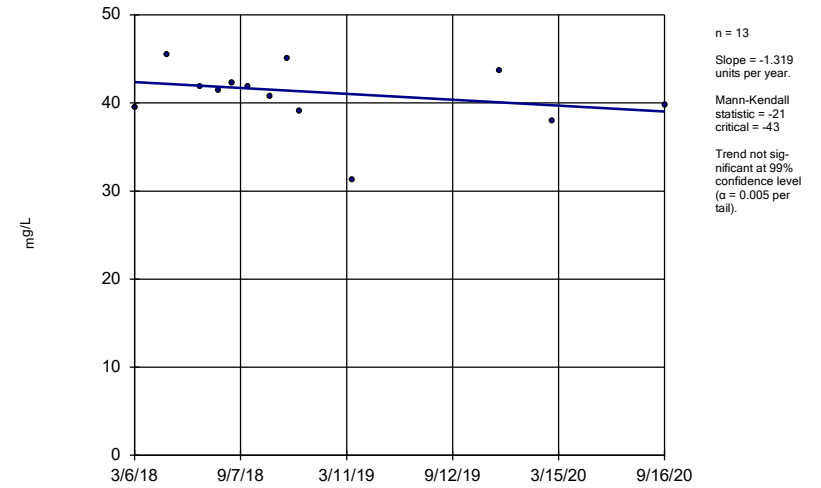
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-32S



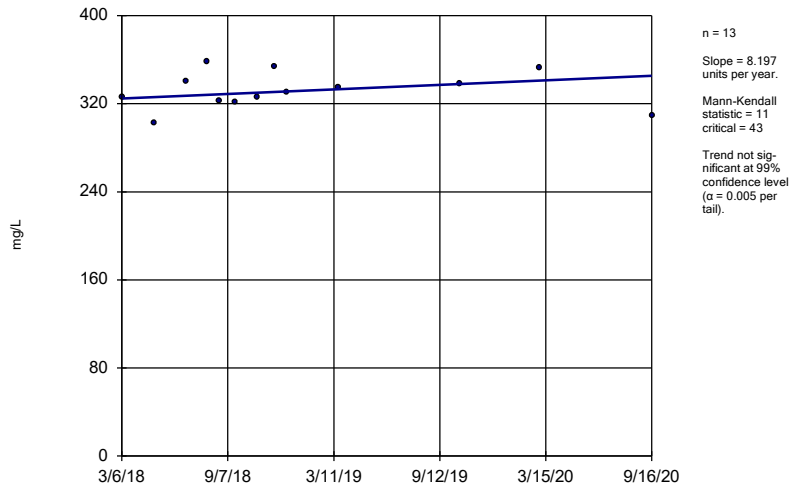
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-45



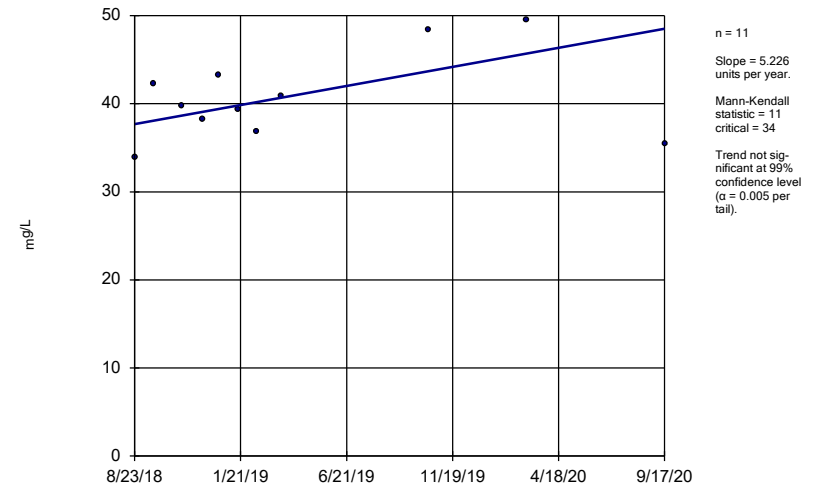
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

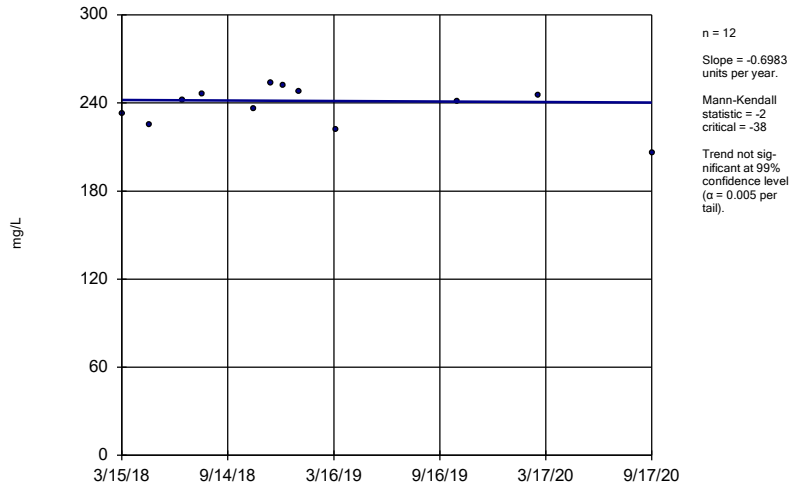
Sen's Slope Estimator
BRGWC-52I



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

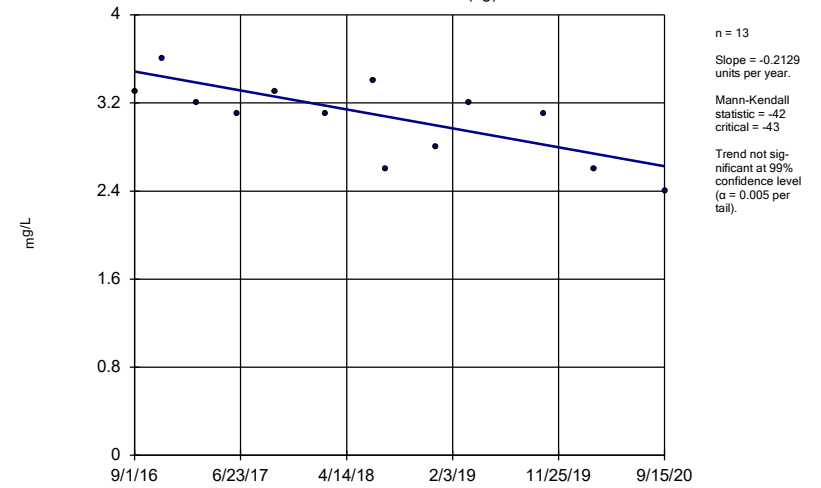
BRGWC-50



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

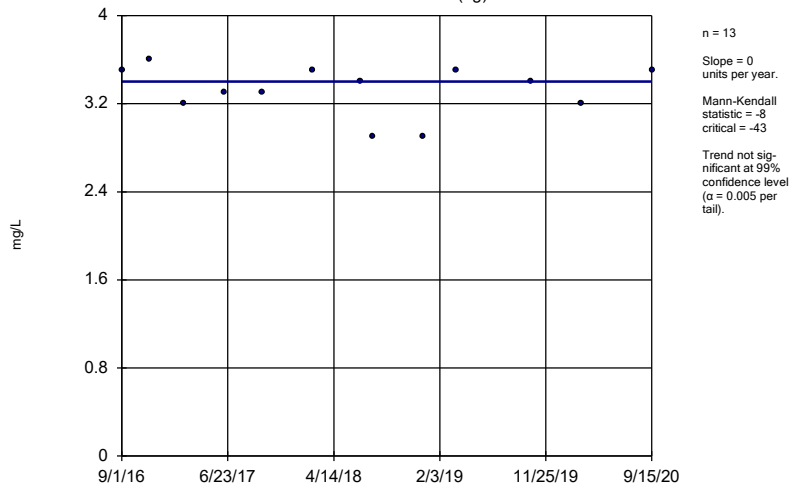
BRGWA-12I (bg)



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

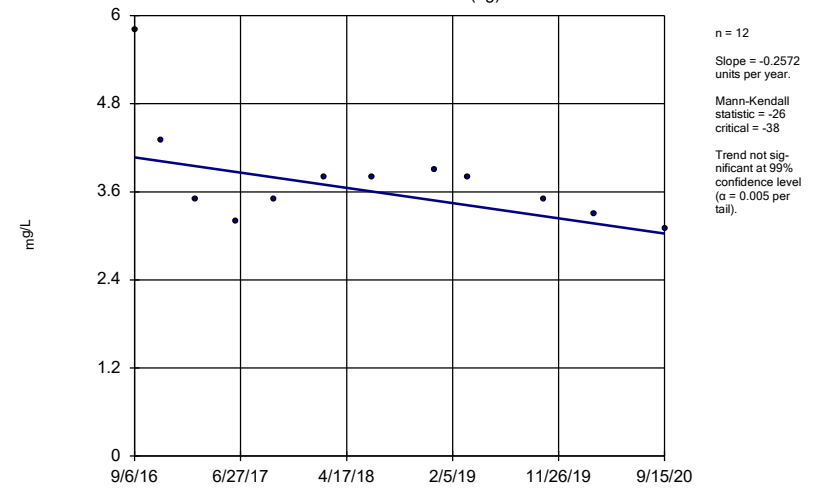
BRGWA-12S (bg)



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

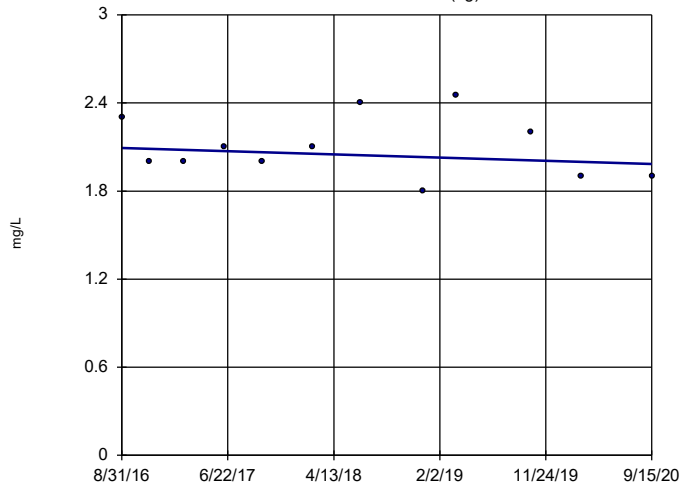
BRGWA-23S (bg)



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)

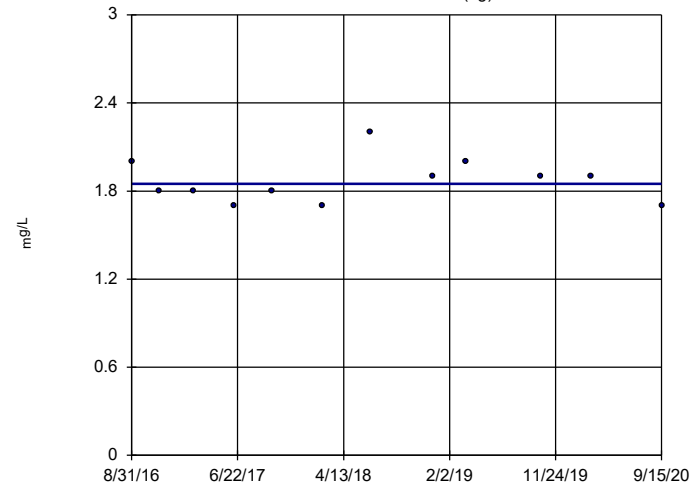


n = 12
 Slope = -0.02706 units per year.
 Mann-Kendall statistic = -7
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

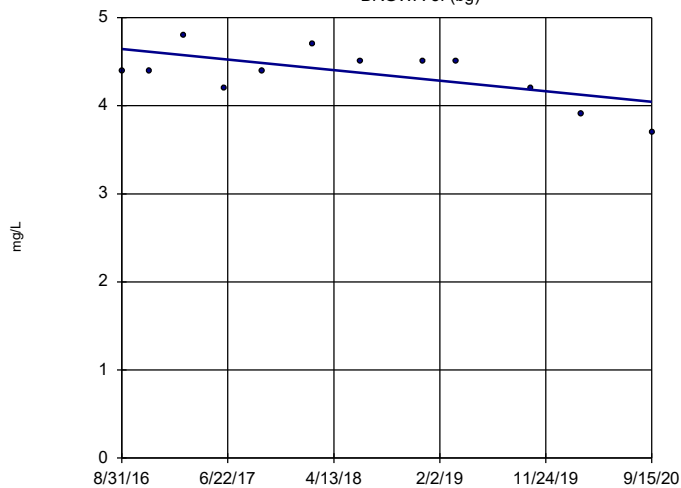


n = 12
 Slope = 0 units per year.
 Mann-Kendall statistic = 0
 critical = 38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

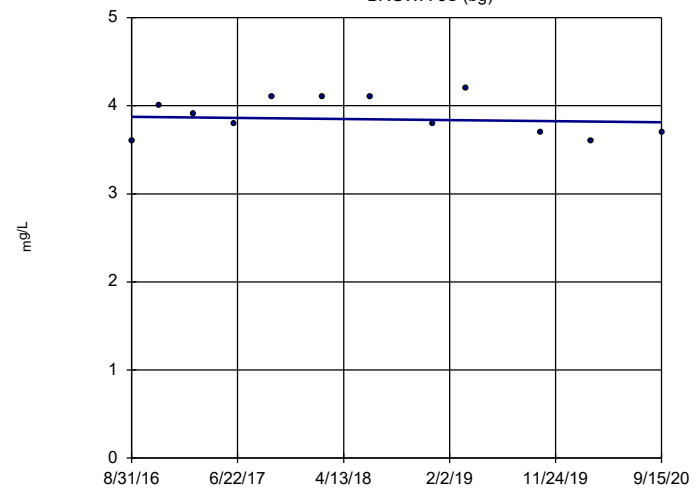


n = 12
 Slope = -0.1482 units per year.
 Mann-Kendall statistic = -21
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

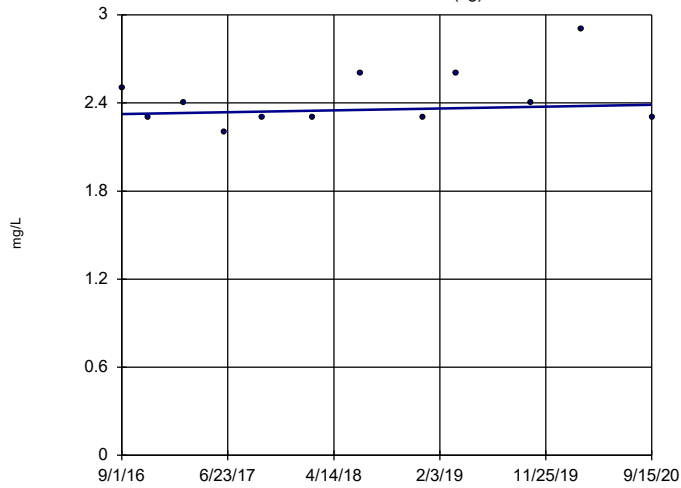


n = 12
 Slope = -0.01532 units per year.
 Mann-Kendall statistic = -6
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

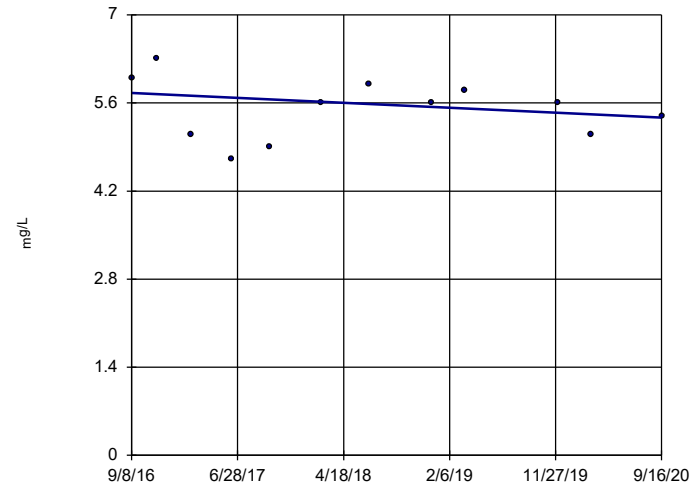


n = 12
 Slope = 0.01532 units per year.
 Mann-Kendall statistic = 12
 critical = 38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

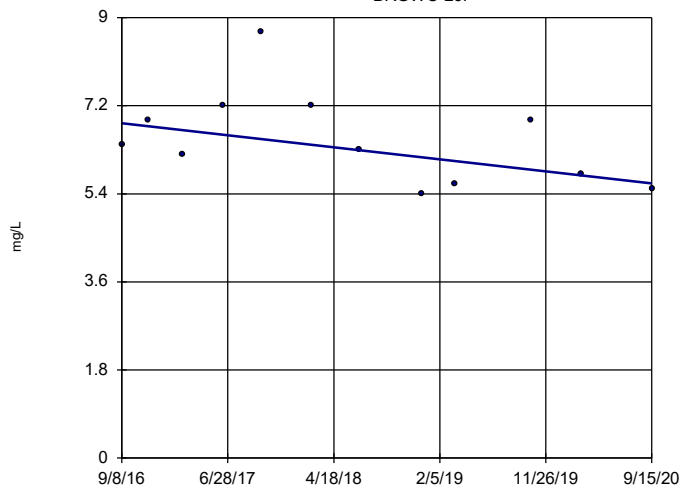


n = 12
 Slope = -0.09698 units per year.
 Mann-Kendall statistic = -10
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

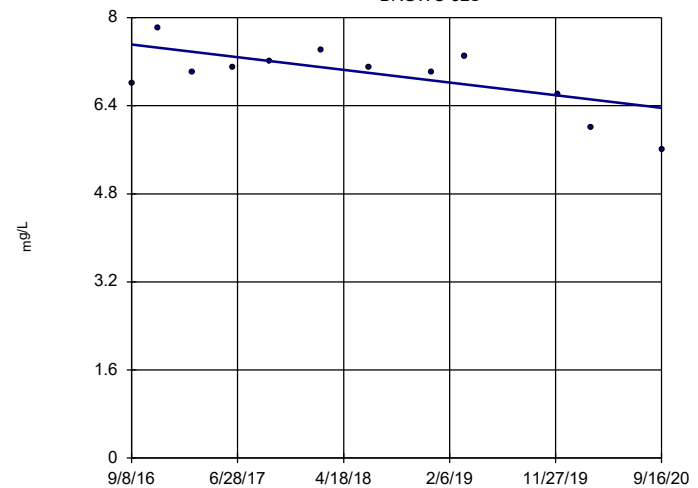


n = 12
 Slope = -0.3063 units per year.
 Mann-Kendall statistic = -22
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

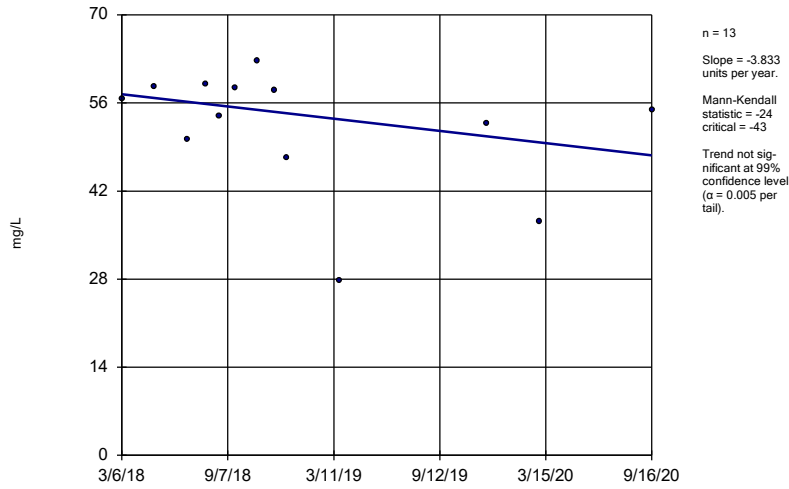
BRGWC-32S



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).

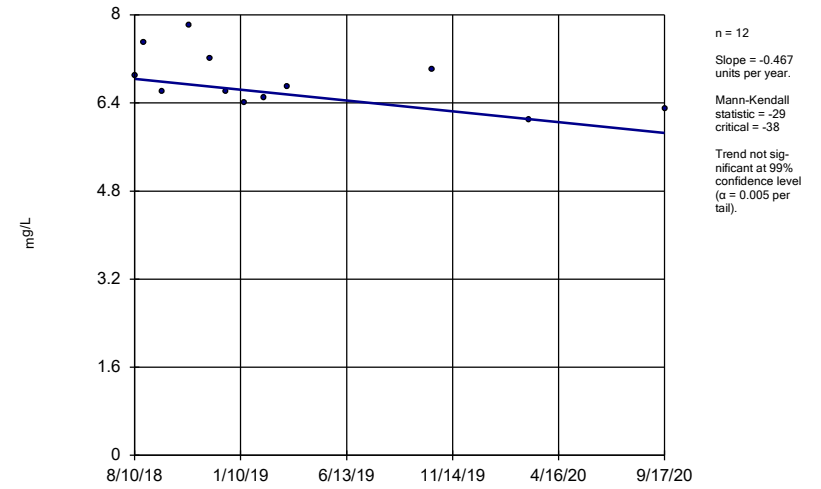
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-45



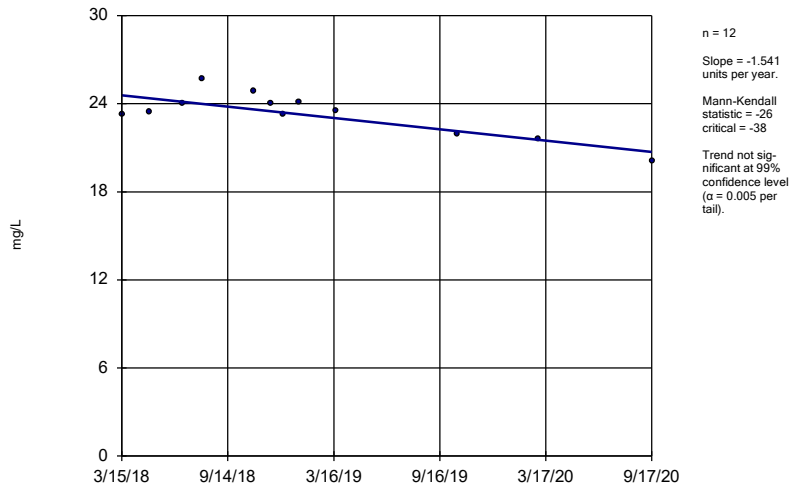
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-52I



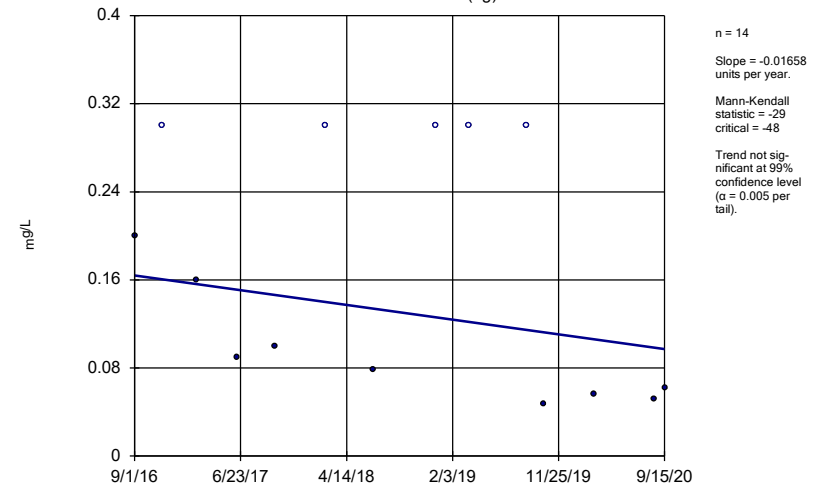
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-50



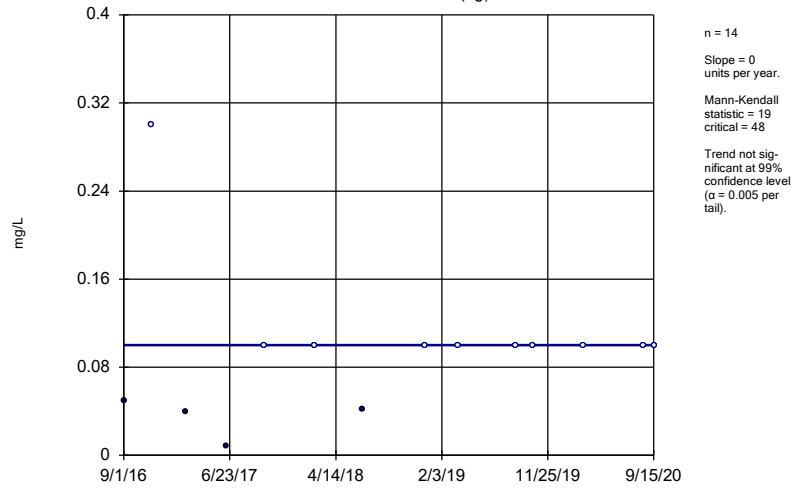
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWA-12I (bg)



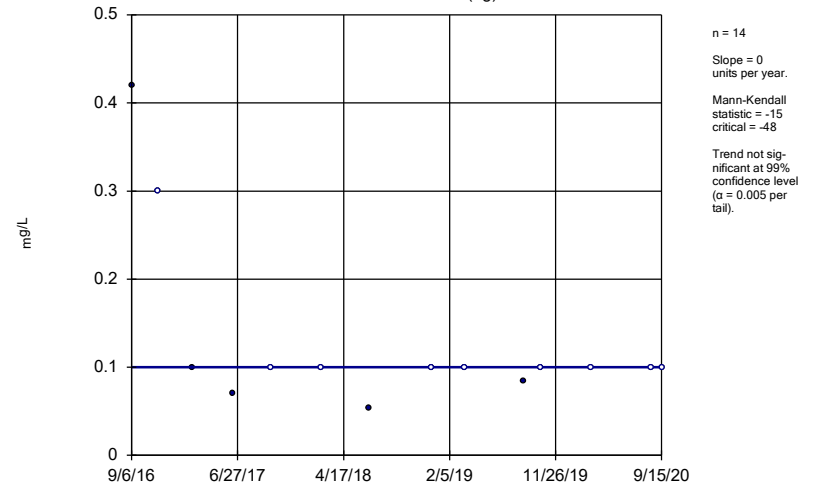
Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWA-12S (bg)



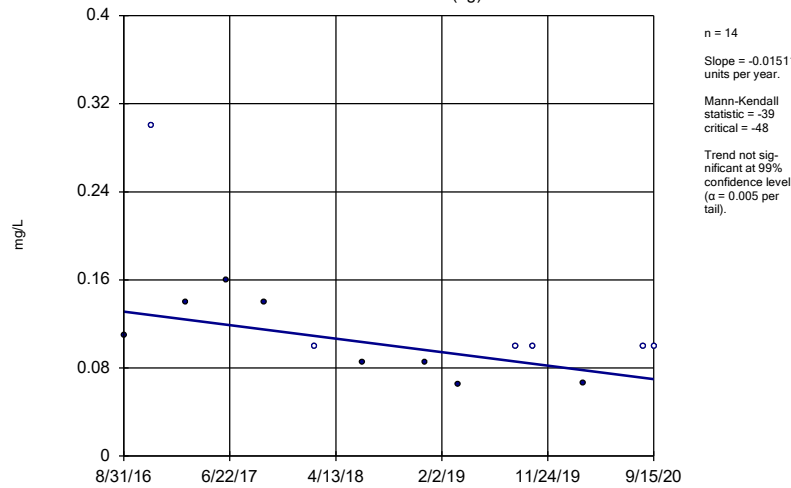
Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWA-23S (bg)



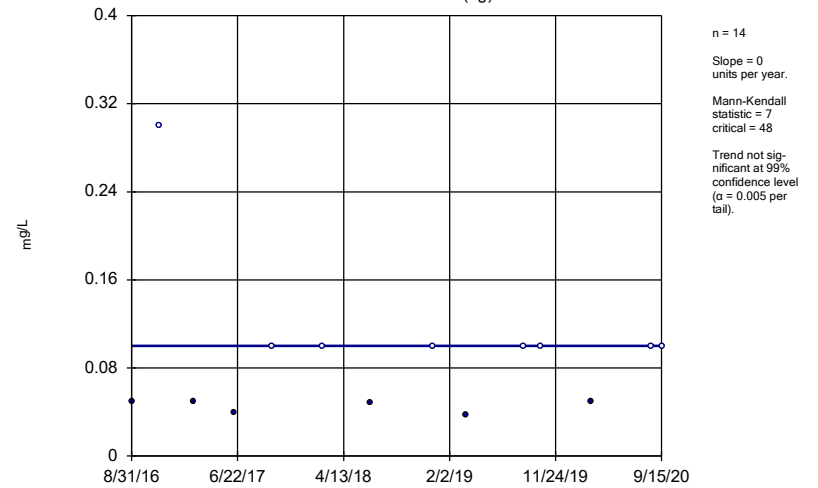
Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

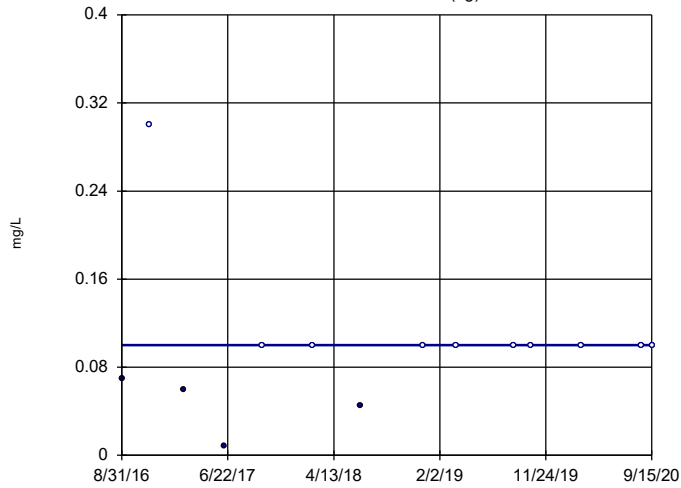
Sen's Slope Estimator
BRGWA-2S (bg)



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)

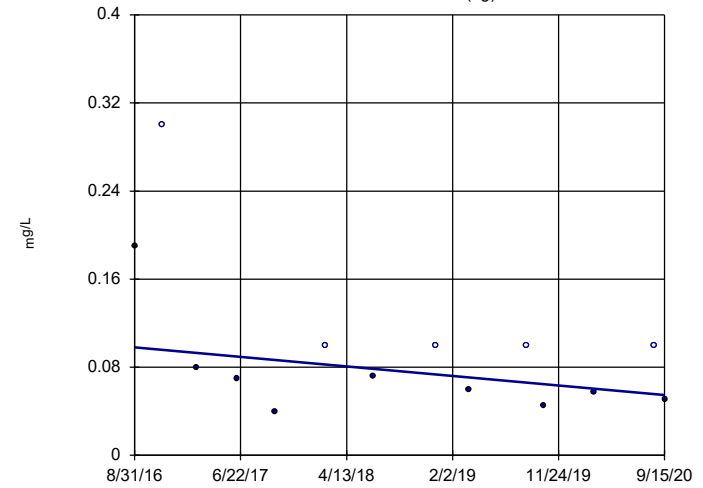


n = 14
Slope = 0
units per year.
Mann-Kendall
statistic = 17
critical = 48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

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)

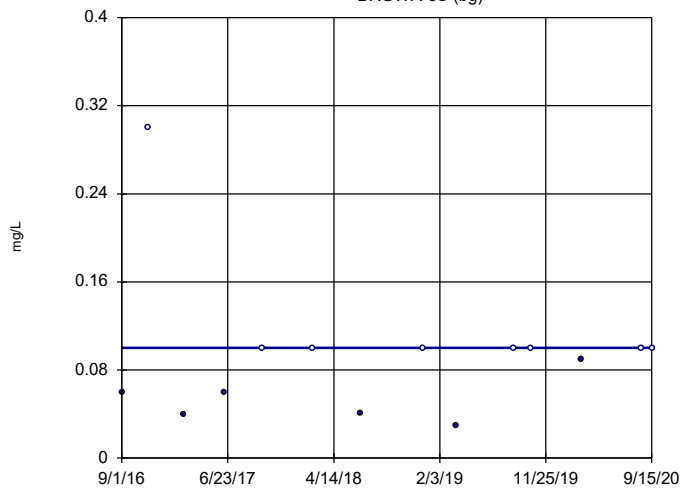


n = 14
Slope = -0.01067
units per year.
Mann-Kendall
statistic = -29
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

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)

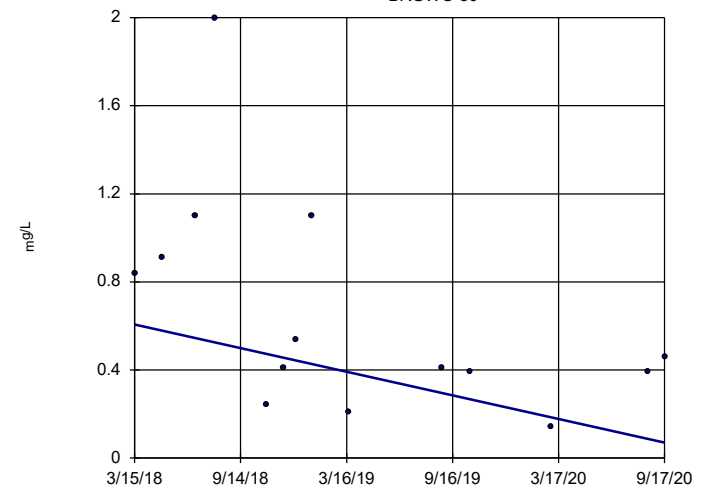


n = 14
Slope = 0
units per year.
Mann-Kendall
statistic = 11
critical = 48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

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

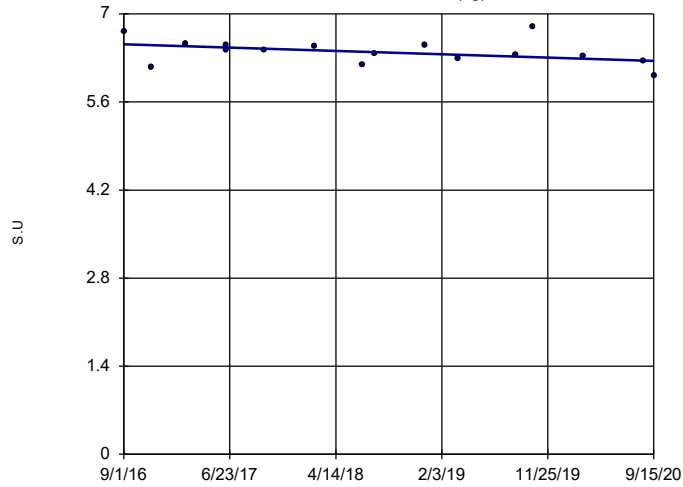


n = 14
Slope = -0.2133
units per year.
Mann-Kendall
statistic = -32
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

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)

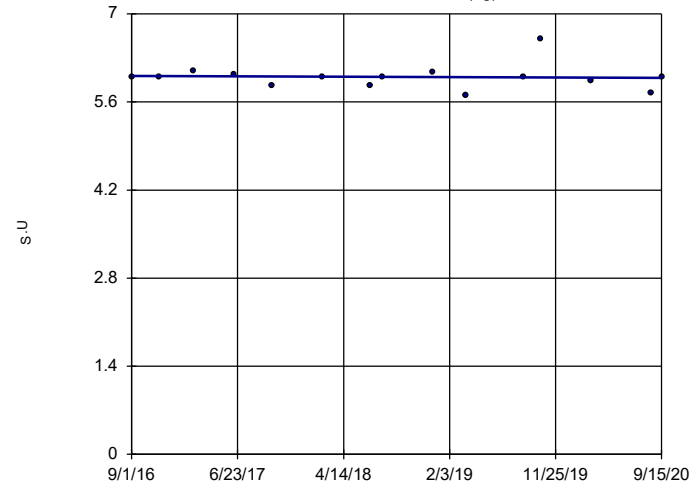


n = 16
 Slope = -0.06443
 units per year.
 Mann-Kendall
 statistic = -41
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)

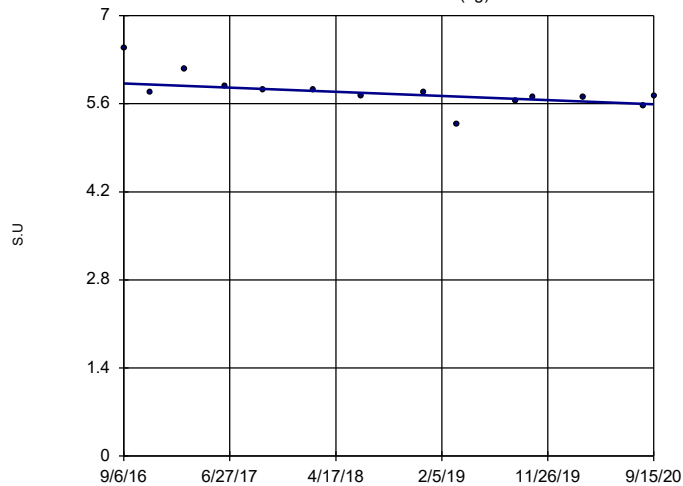


n = 15
 Slope = -0.006874
 units per year.
 Mann-Kendall
 statistic = -14
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)

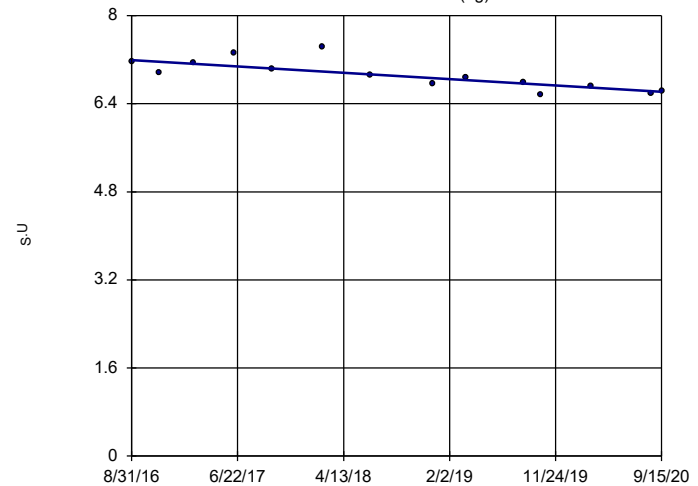


n = 14
 Slope = -0.08225
 units per year.
 Mann-Kendall
 statistic = -56
 critical = -48
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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)

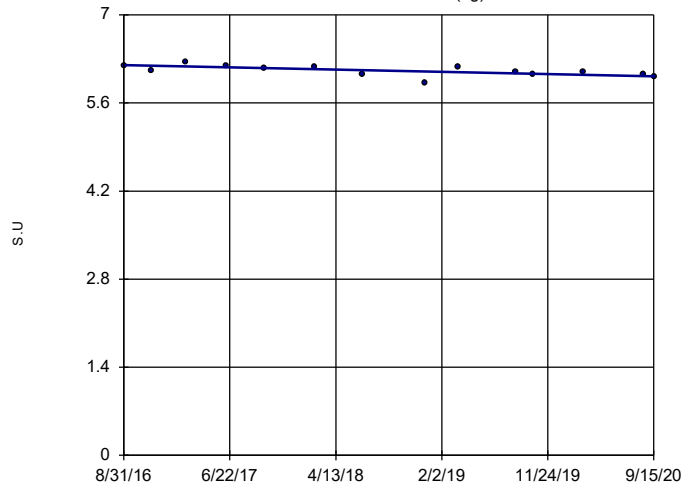


n = 14
 Slope = -0.1422
 units per year.
 Mann-Kendall
 statistic = -59
 critical = -48
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

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

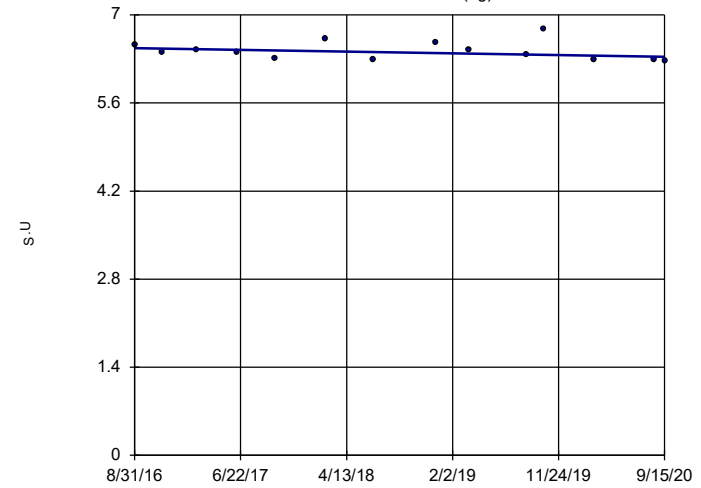
BRGWA-2S (bg)



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

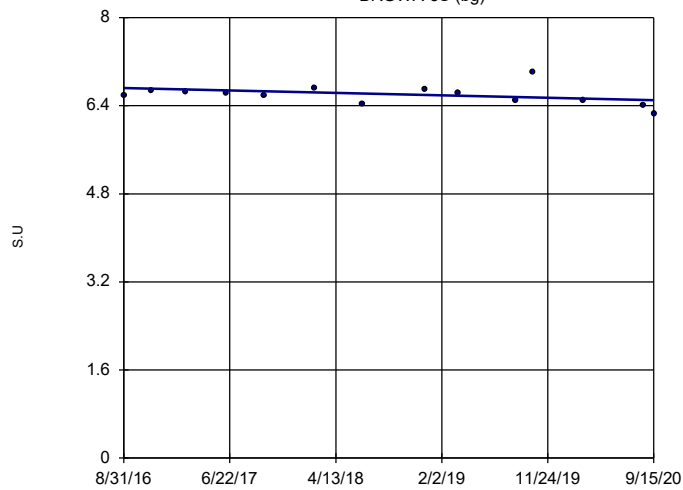
BRGWA-5I (bg)



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

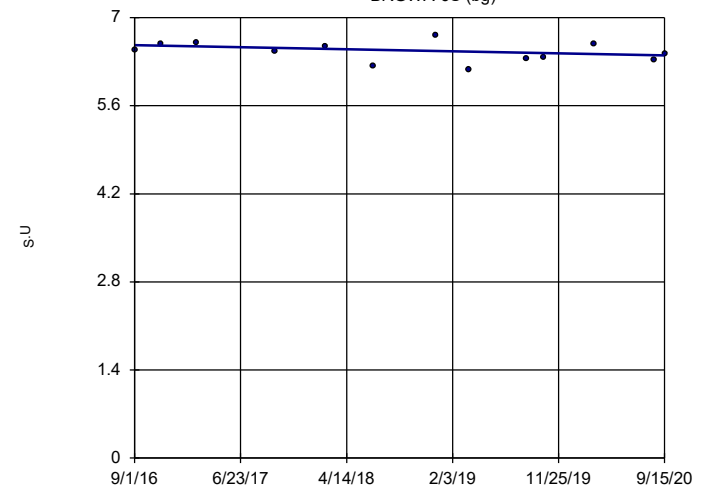
BRGWA-5S (bg)



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

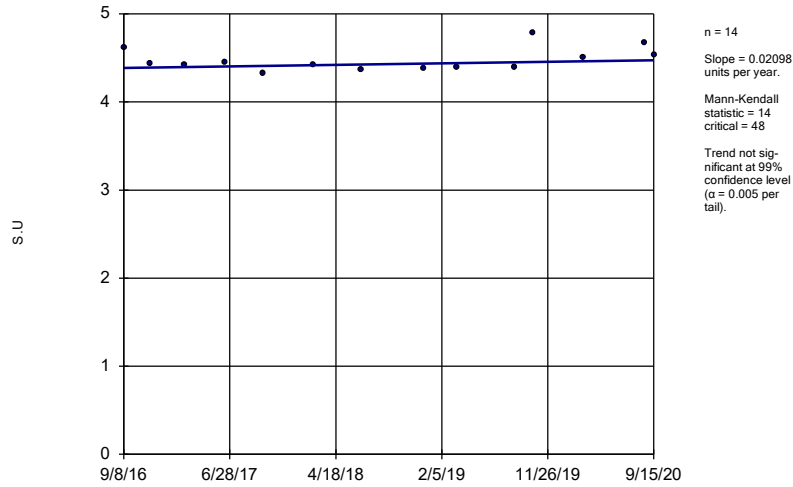
Sen's Slope Estimator

BRGWA-6S (bg)



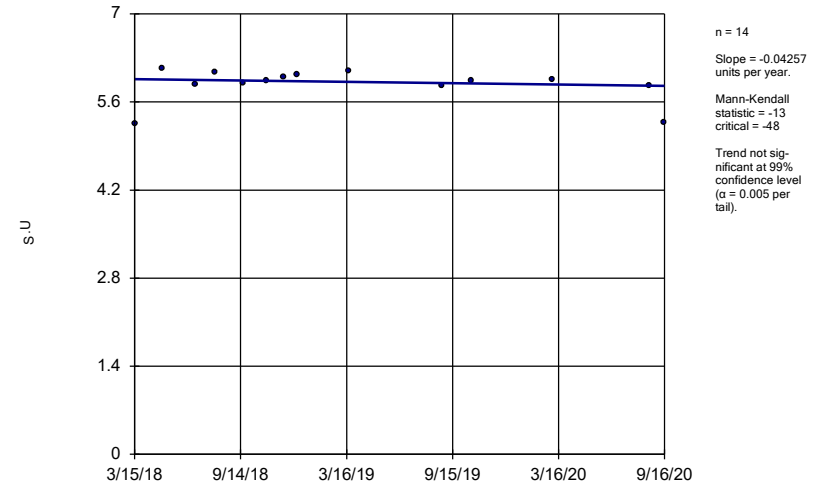
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-29I



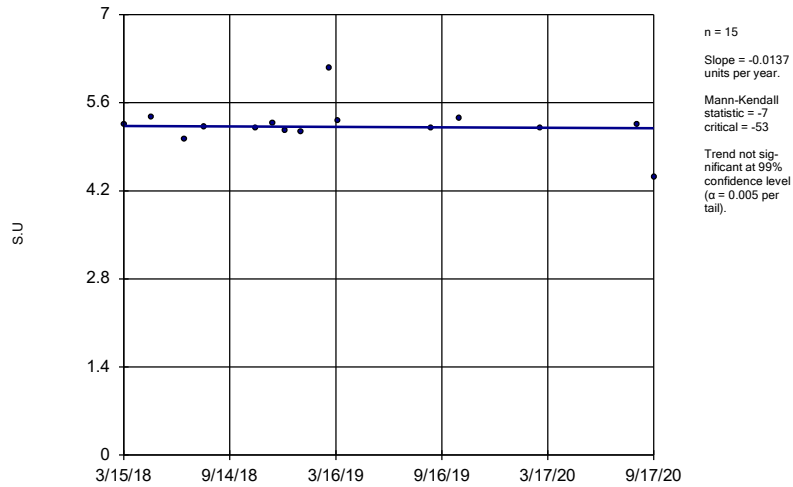
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-45



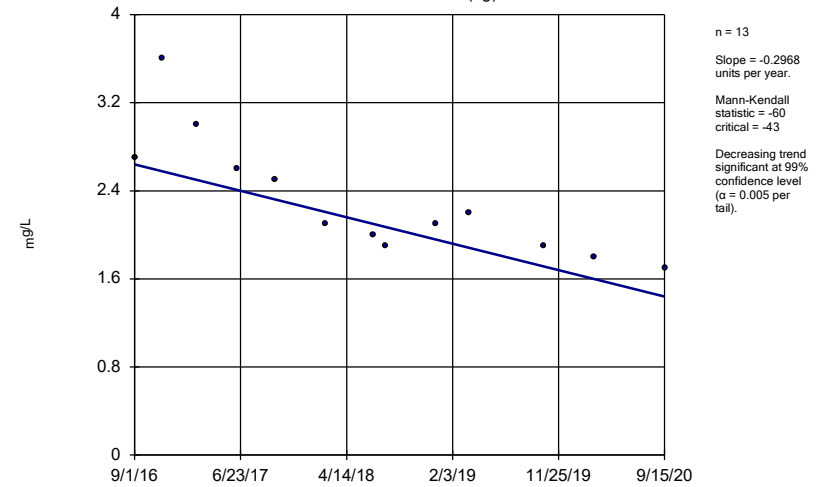
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-50



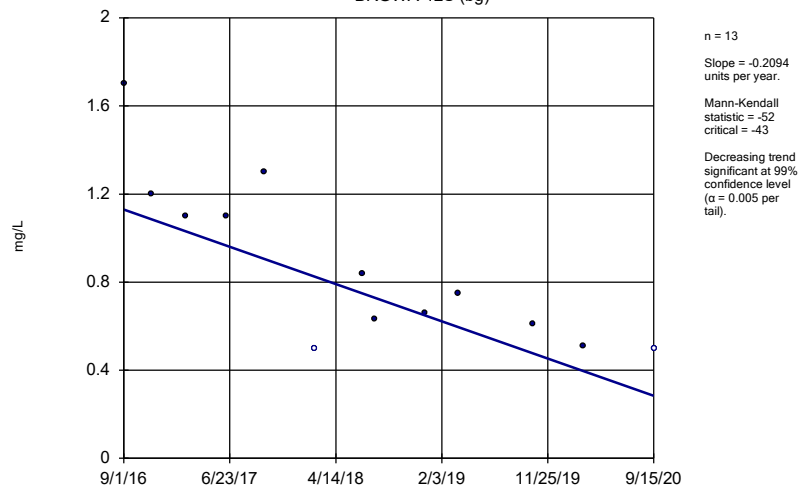
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWA-12I (bg)



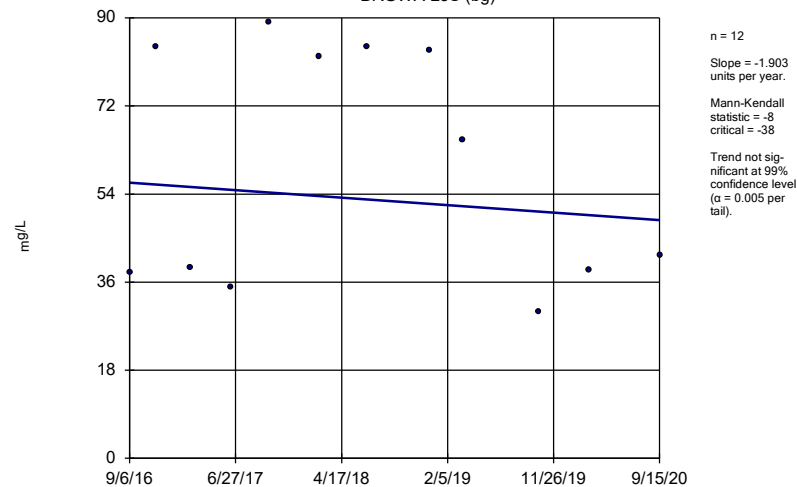
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
 BRGWA-12S (bg)



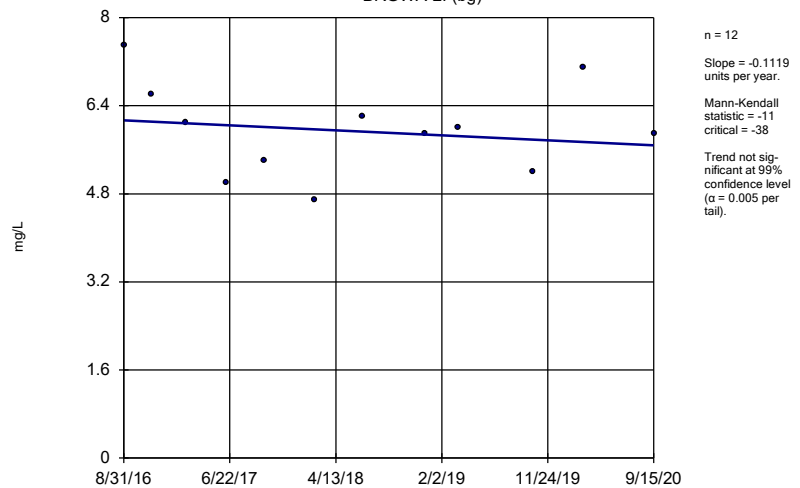
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
 BRGWA-23S (bg)



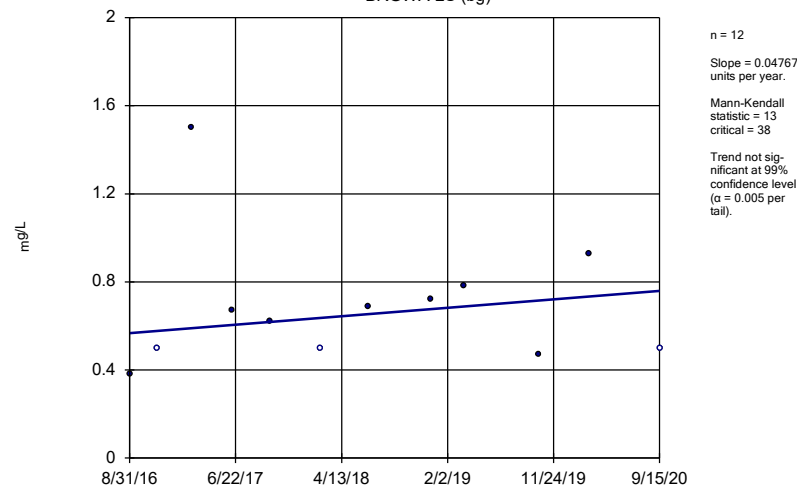
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
 BRGWA-2I (bg)



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

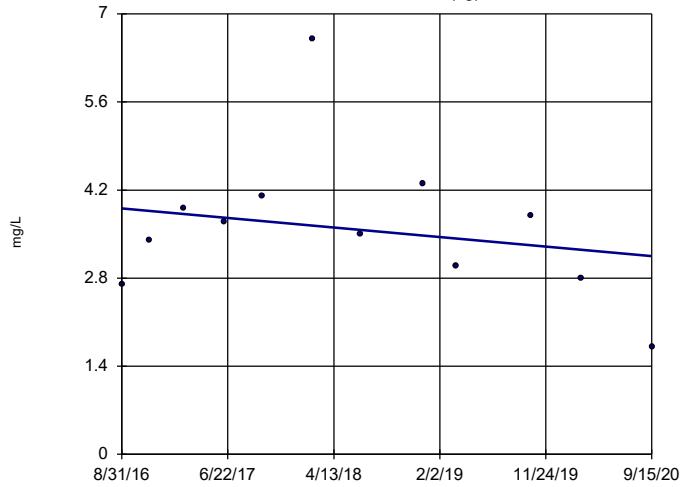
Sen's Slope Estimator
 BRGWA-2S (bg)



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)



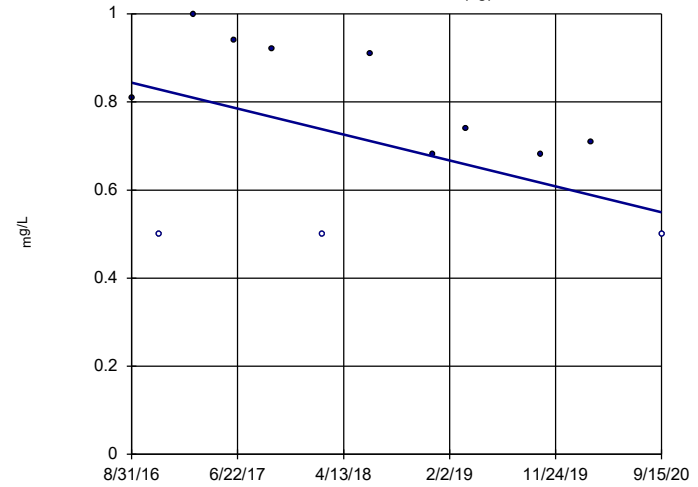
n = 12
 Slope = -0.1873 units per year.
 Mann-Kendall statistic = -8
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)



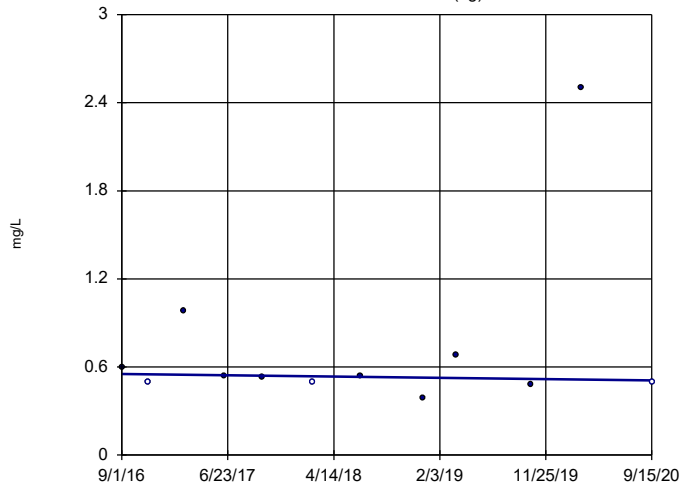
n = 12
 Slope = -0.07276 units per year.
 Mann-Kendall statistic = -22
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

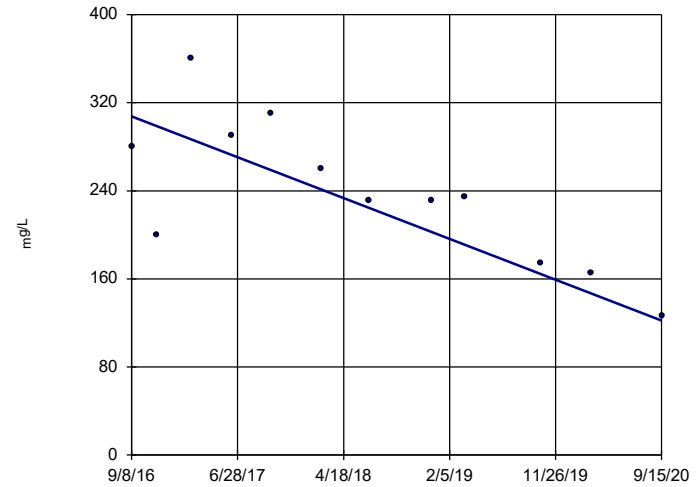


n = 12
 Slope = -0.01104 units per year.
 Mann-Kendall statistic = -8
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

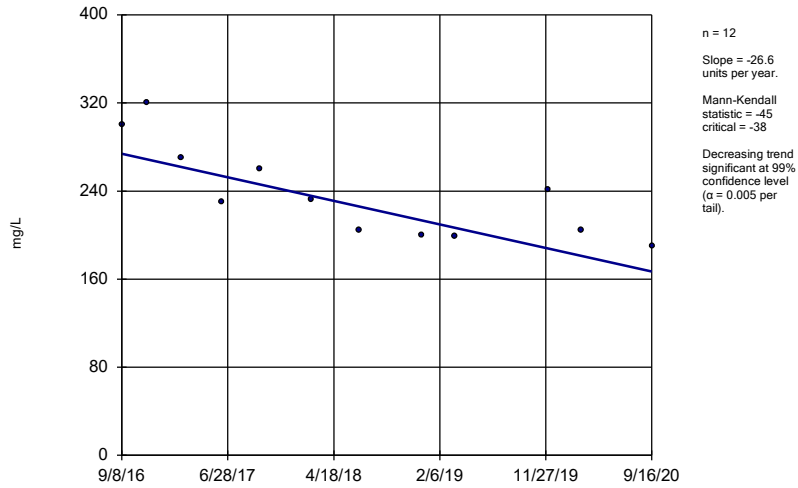
BRGWC-25I



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).

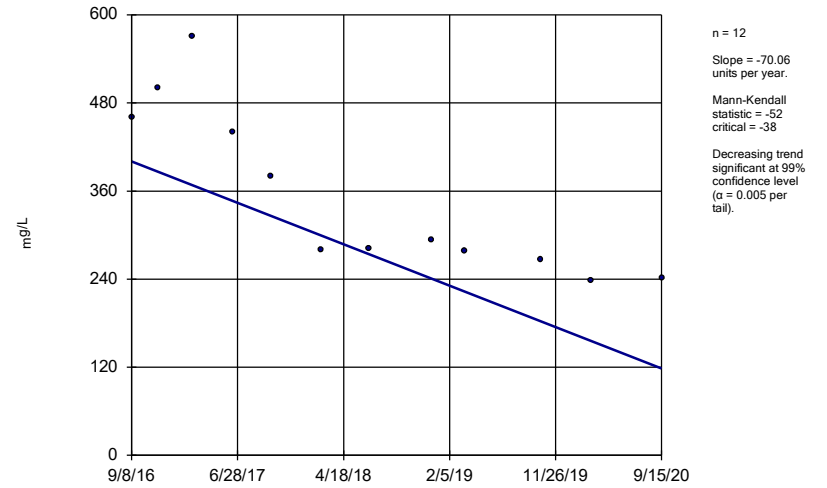
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-27I



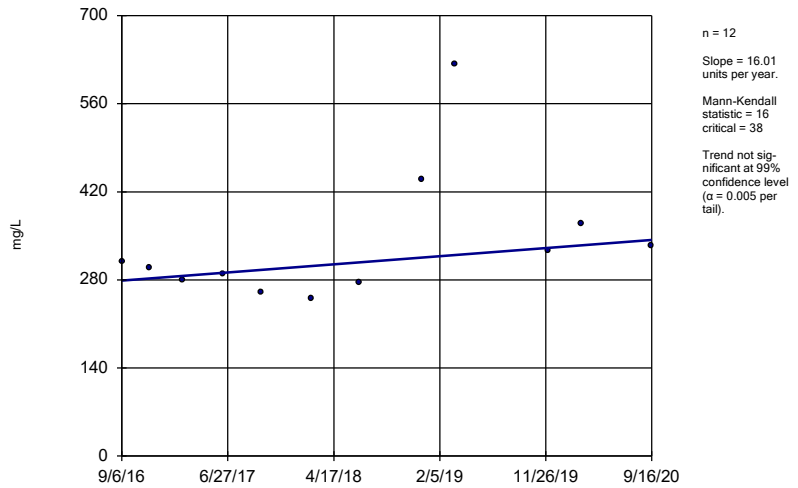
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-29I



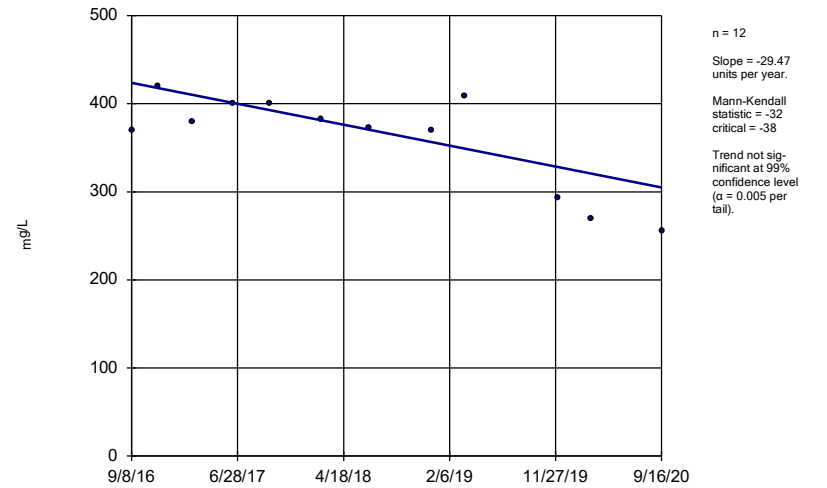
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-30I



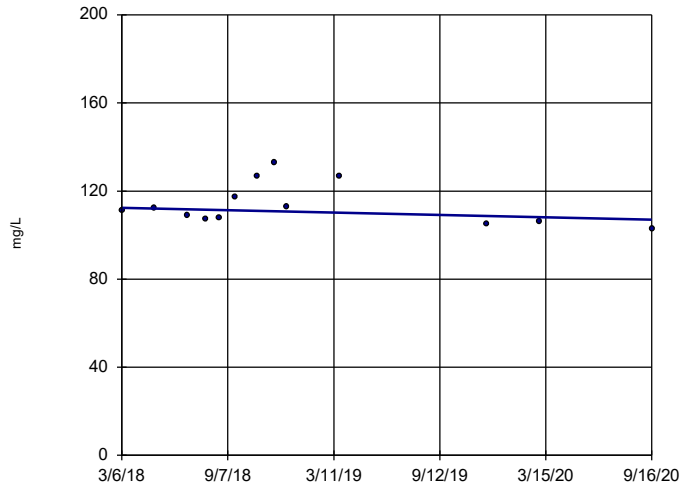
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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

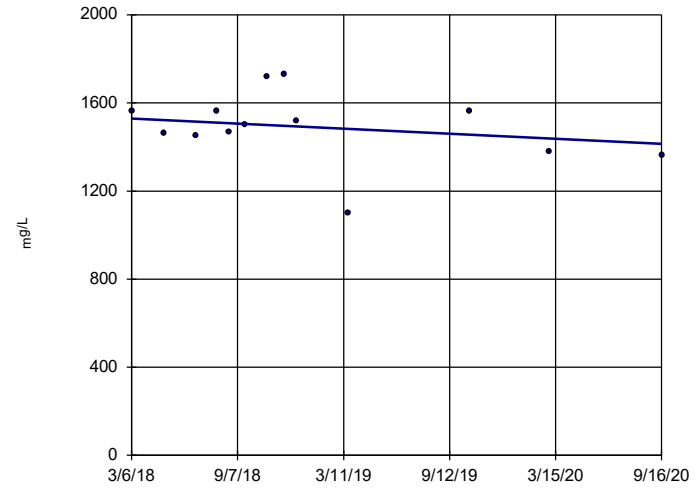
Sen's Slope Estimator
BRGWC-45



n = 13
Slope = -2.111 units per year.
Mann-Kendall statistic = -11
critical = -43
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

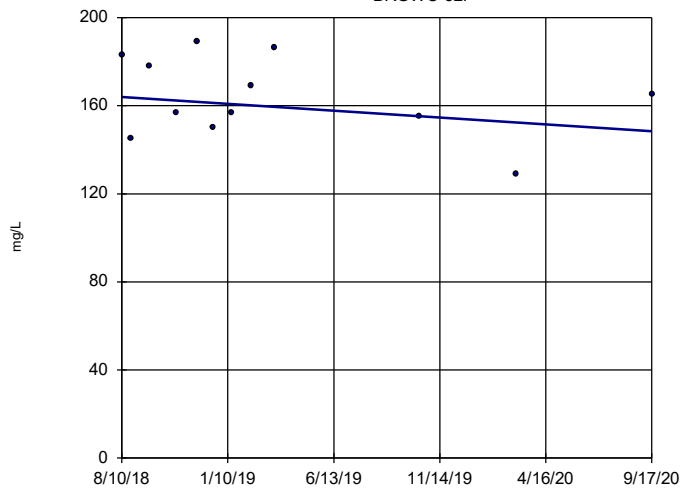
Sen's Slope Estimator
BRGWC-47



n = 13
Slope = -45.1 units per year.
Mann-Kendall statistic = -11
critical = -43
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

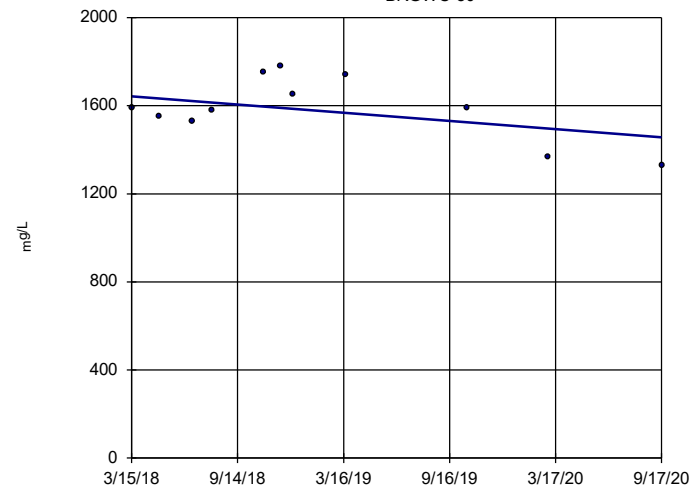
Sen's Slope Estimator
BRGWC-52I



n = 12
Slope = -7.328 units per year.
Mann-Kendall statistic = -9
critical = -38
Trend not significant at 99% confidence level (α = 0.005 per tail).

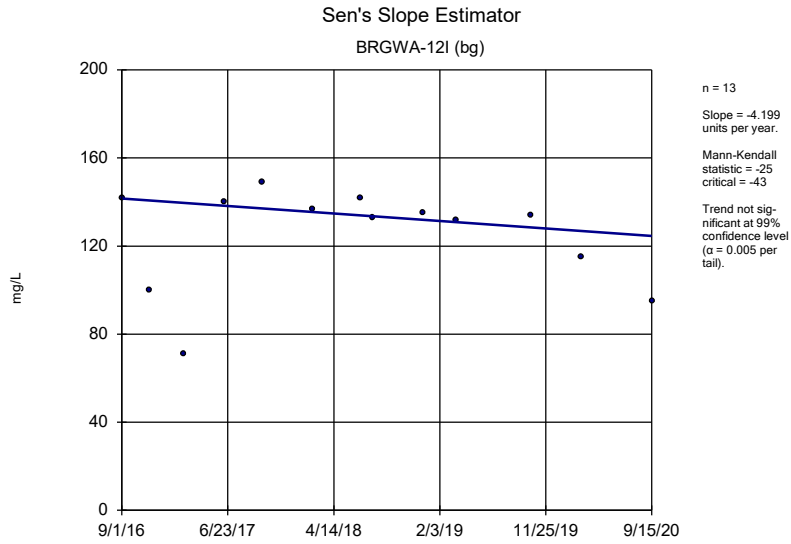
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator
BRGWC-50

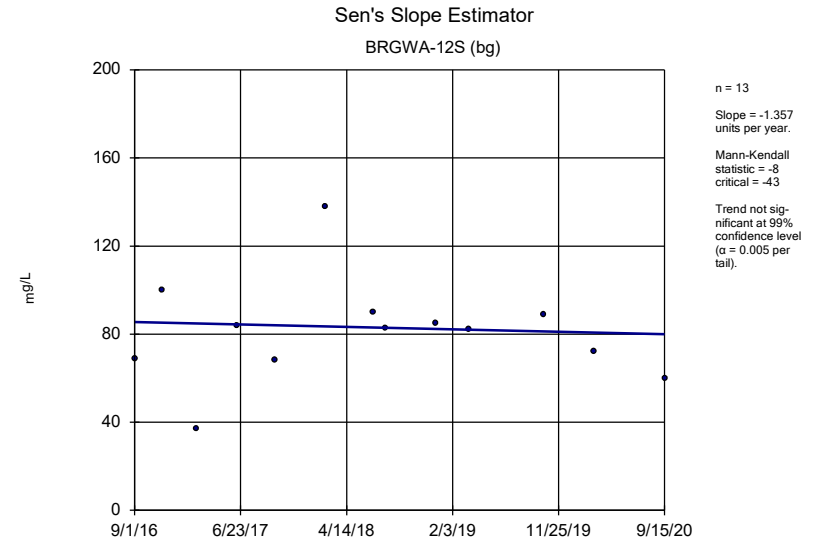


n = 11
Slope = -74.11 units per year.
Mann-Kendall statistic = -8
critical = -34
Trend not significant at 99% confidence level (α = 0.005 per tail).

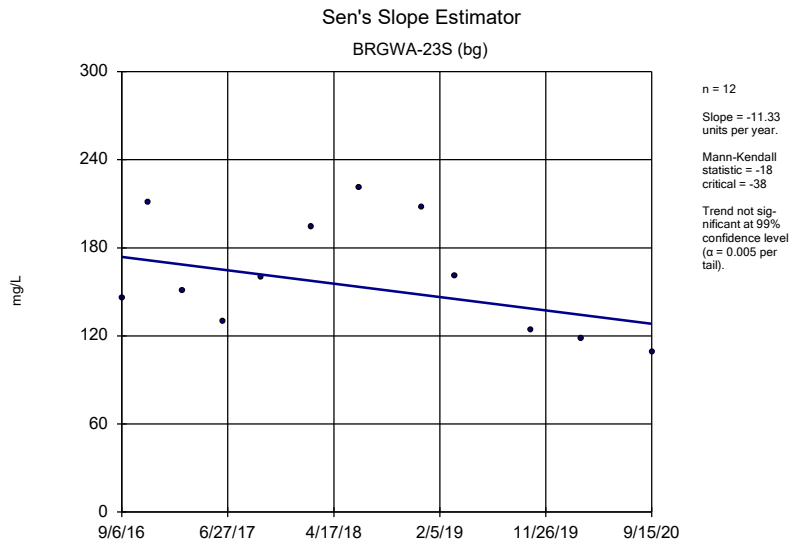
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP



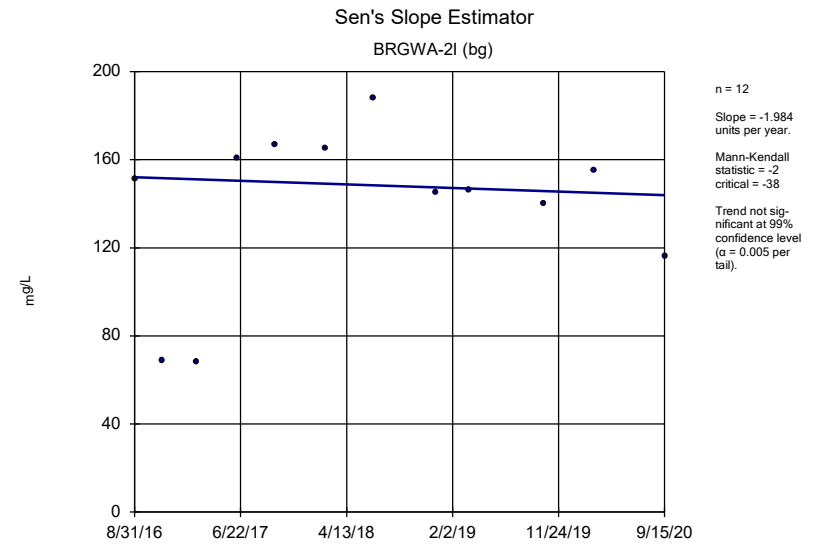
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP



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



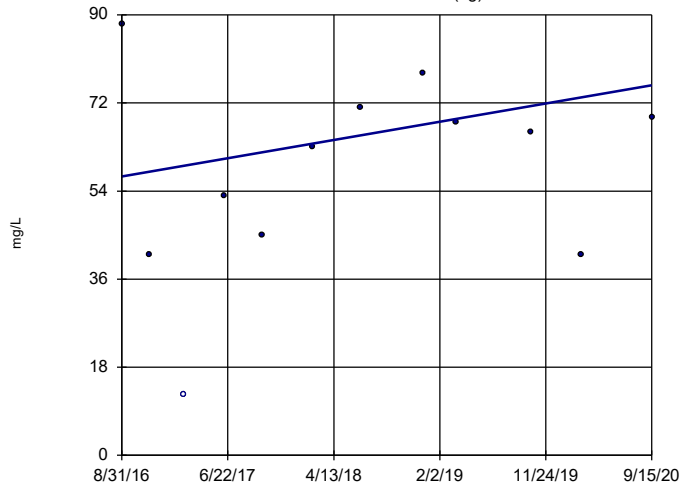
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP



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)

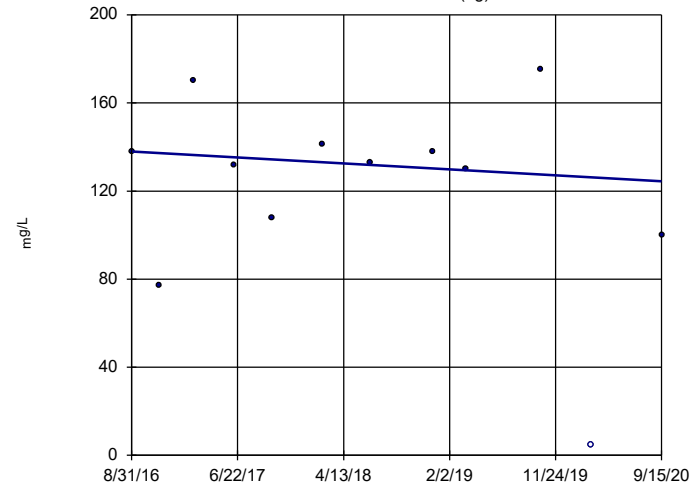


n = 12
 Slope = 4.612 units per year.
 Mann-Kendall statistic = 11
 critical = 38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

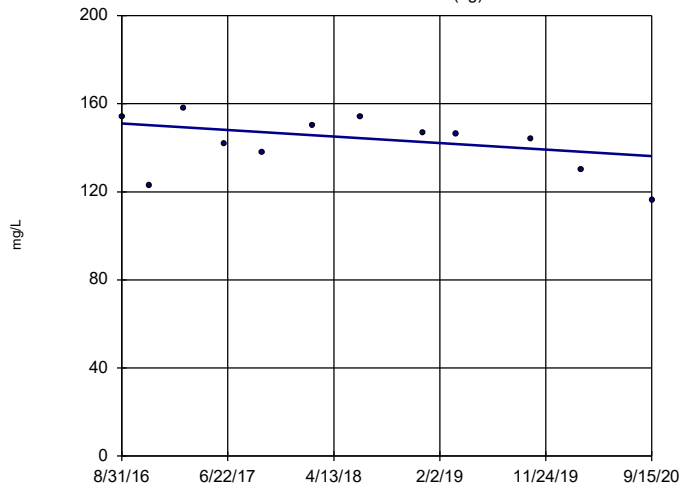


n = 12
 Slope = -3.347 units per year.
 Mann-Kendall statistic = -9
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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)

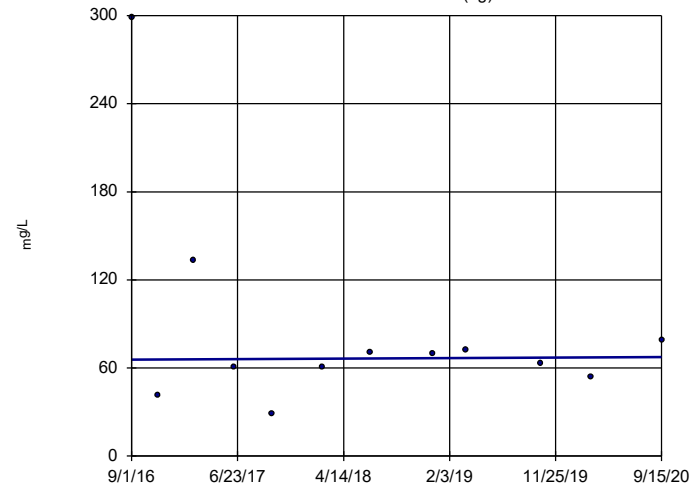


n = 12
 Slope = -3.649 units per year.
 Mann-Kendall statistic = -23
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

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

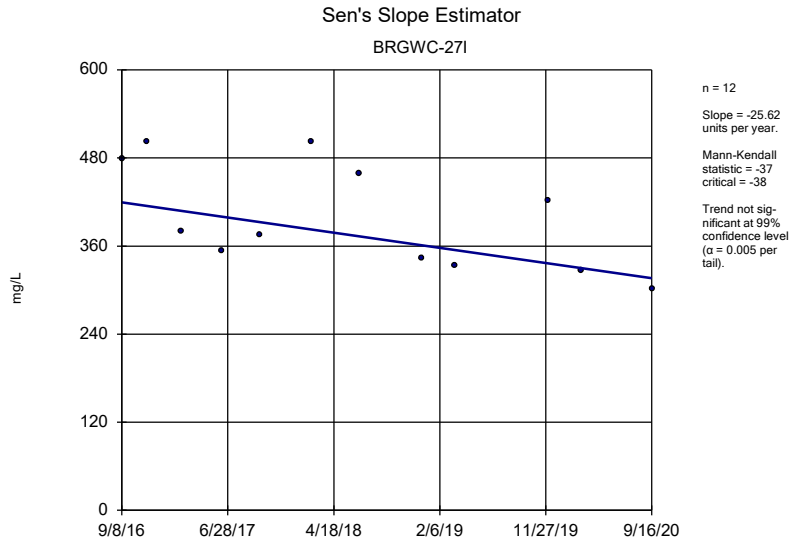
Sen's Slope Estimator

BRGWA-6S (bg)

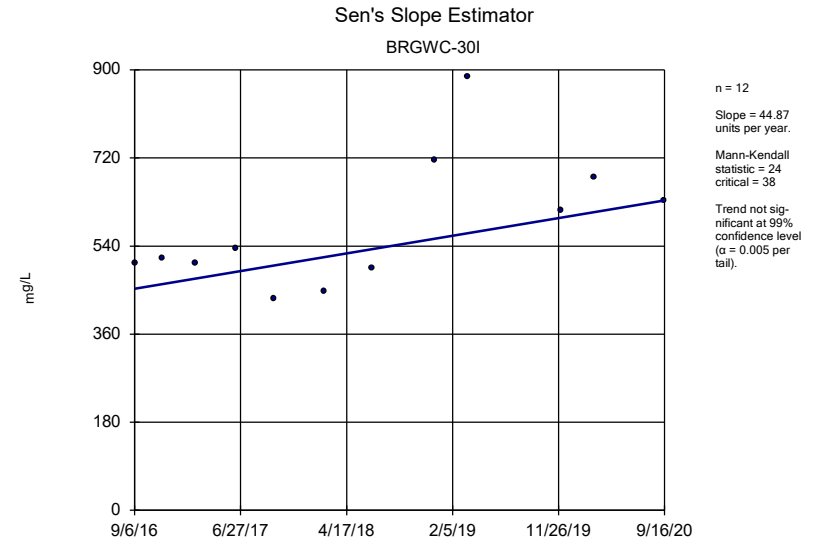


n = 12
 Slope = 0.4269 units per year.
 Mann-Kendall statistic = 1
 critical = 38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

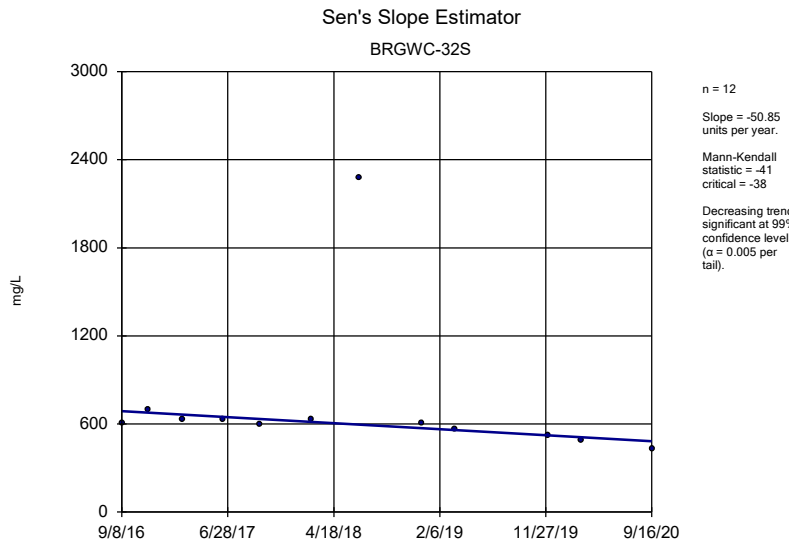
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D
 Plant Branch Client: Southern Company Data: Plant Branch AP



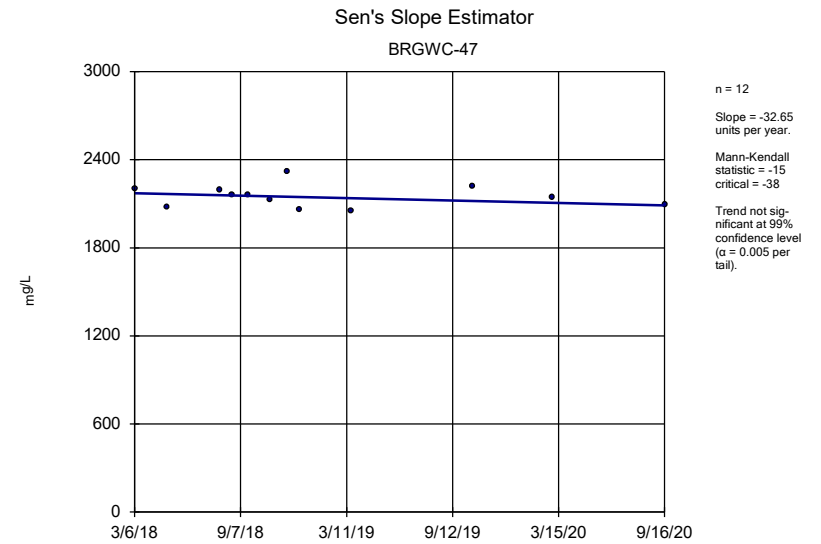
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP



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

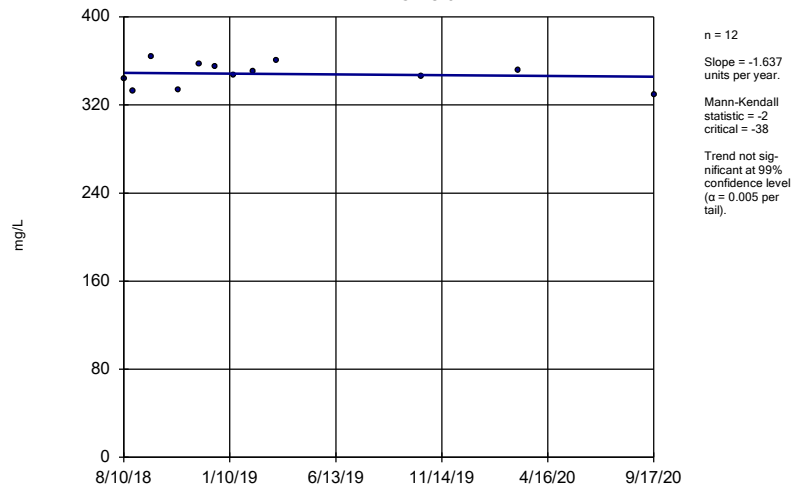


Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP



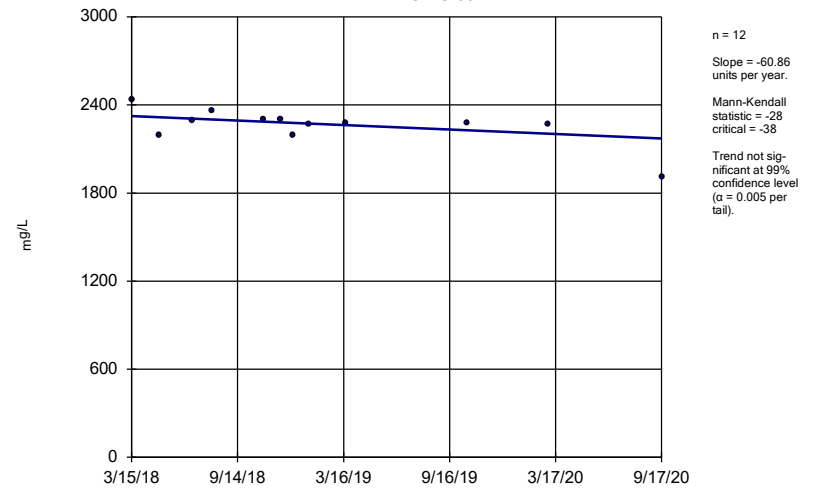
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

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.

PLANT BRANCH PONDS B,C,D GWPS			
Constituent Name	MCL	Background Limit	GWPS
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)
Cadmium (mg/L)	BRGWC-50	0.0482	0.01365	0.005	Yes 13	0.03269	0.02633	0	None	sqrt(x)	0.01	Param.
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)
Cobalt (mg/L)	BRGWC-50	1.5	1.3	0.014	Yes 13	1.392	0.06405	0	None	No	0.01	NP (normality)
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.

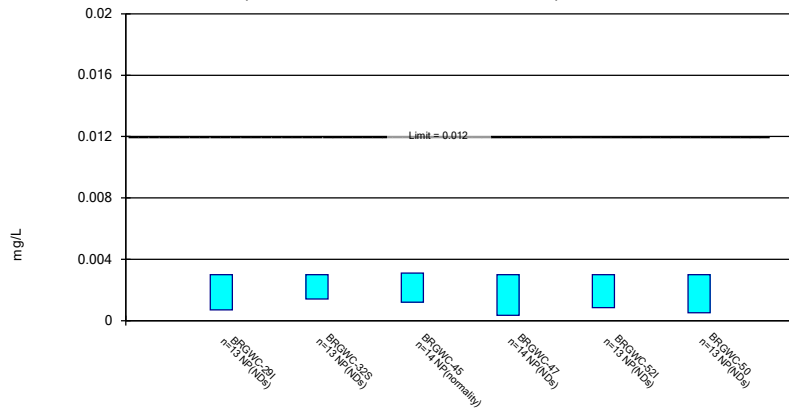
Confidence Interval Summary - All Results

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

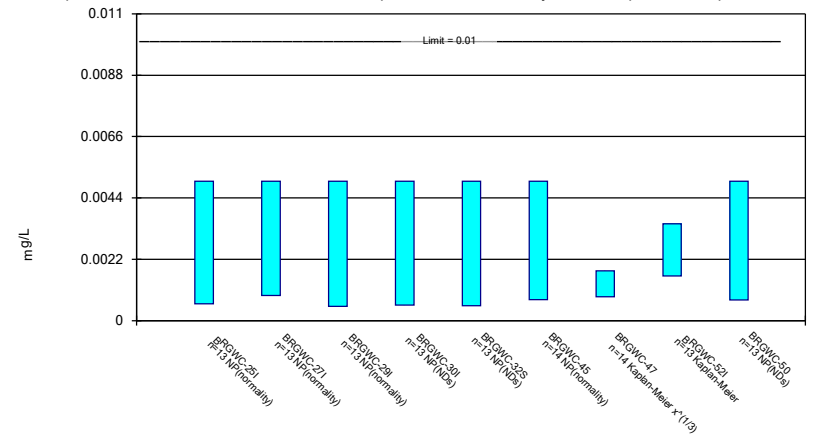
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

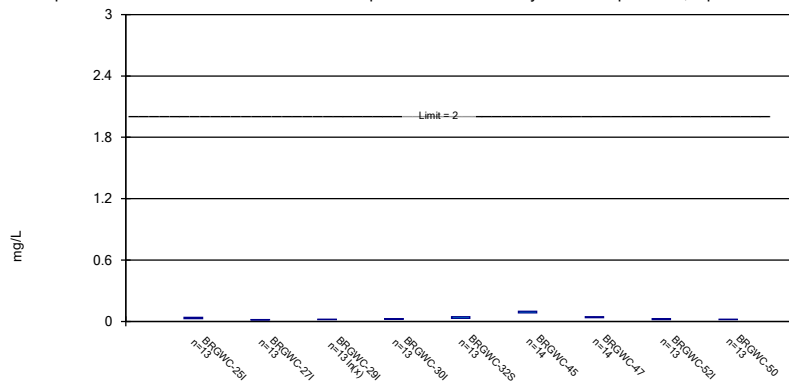
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Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric Confidence Interval

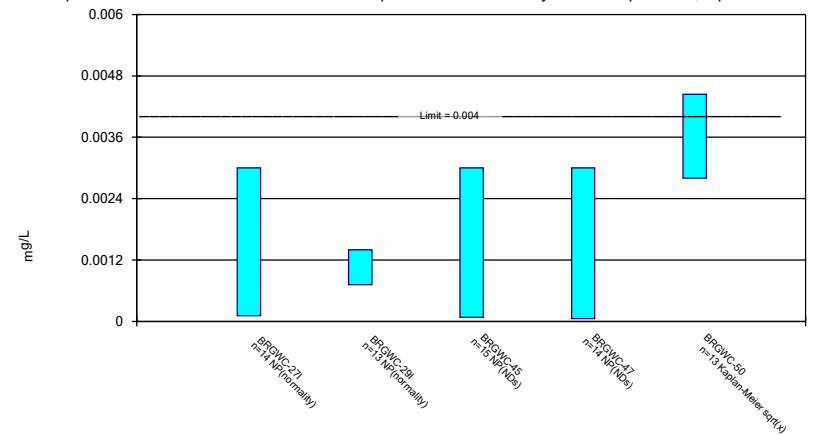
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Constituent: Barium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D
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Parametric and Non-Parametric (NP) Confidence Interval

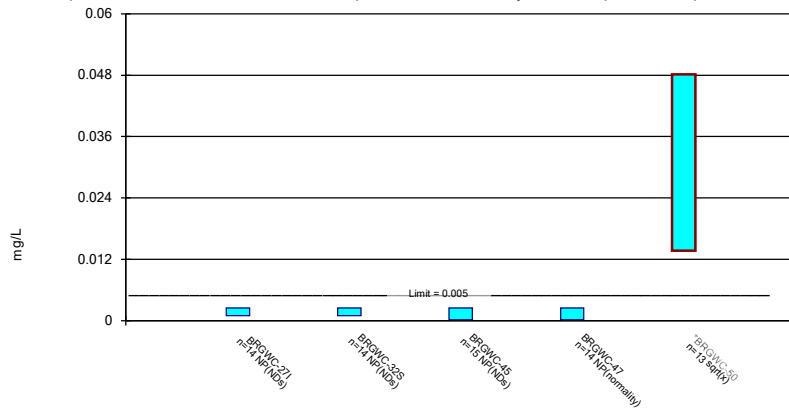
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Constituent: Beryllium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

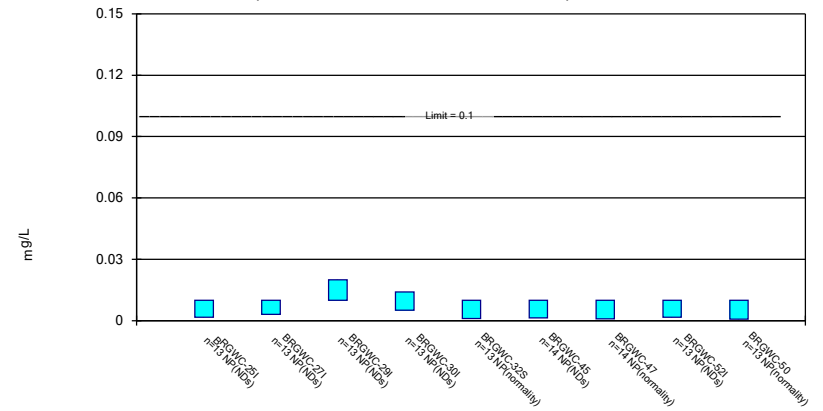
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Constituent: Cadmium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

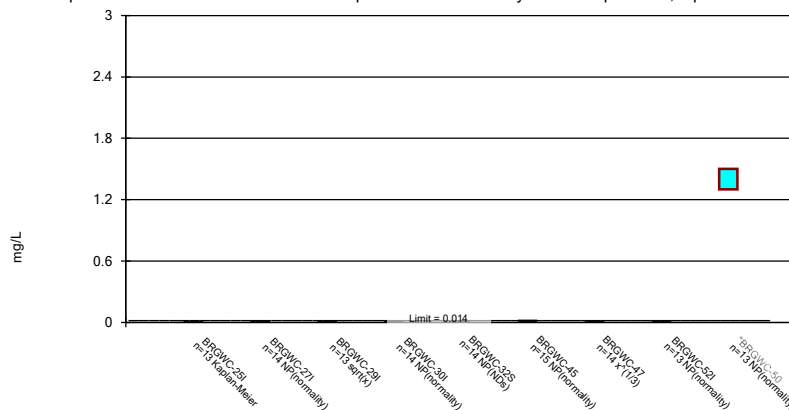
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

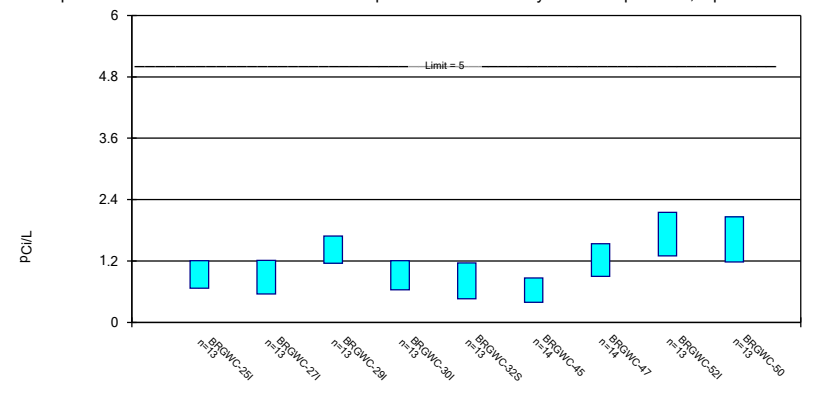
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

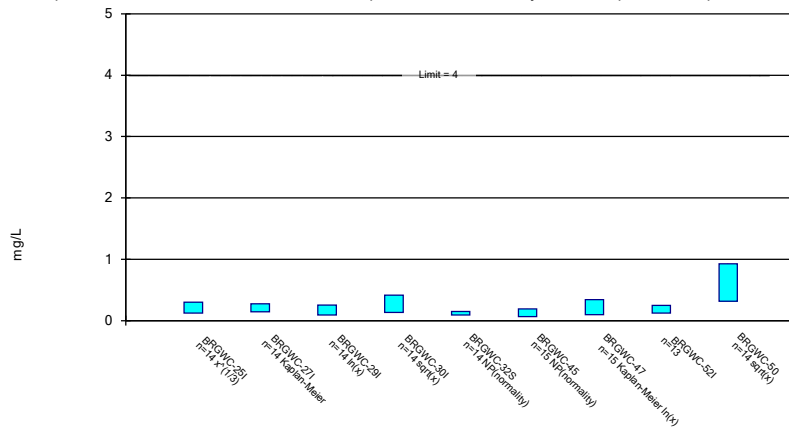
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Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

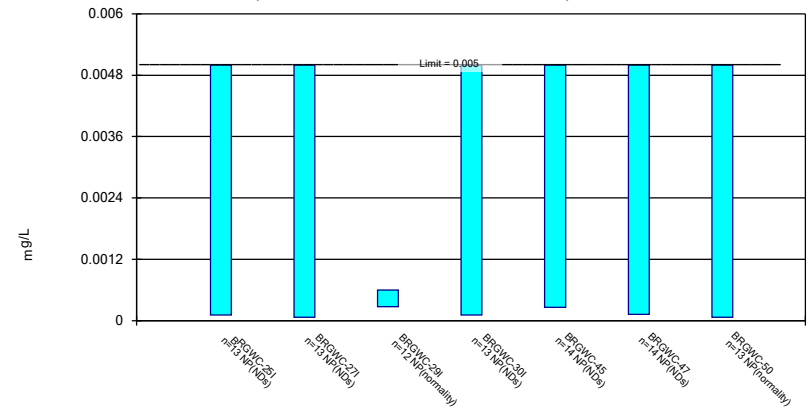
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Constituent: Fluoride Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

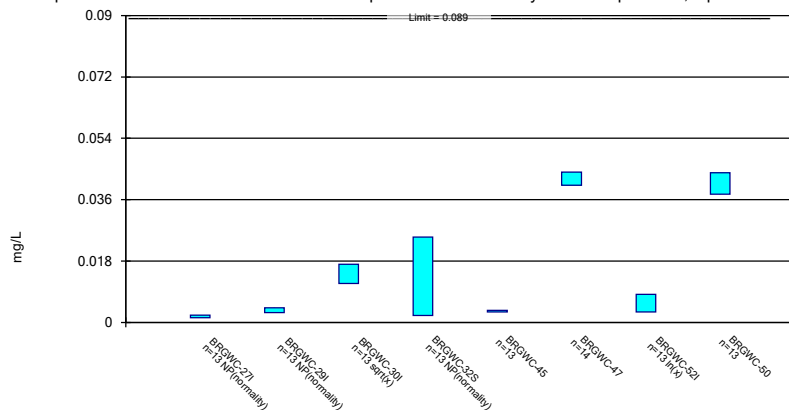
Compliance Limit is not exceeded. Per-well alpha = 0.01.



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

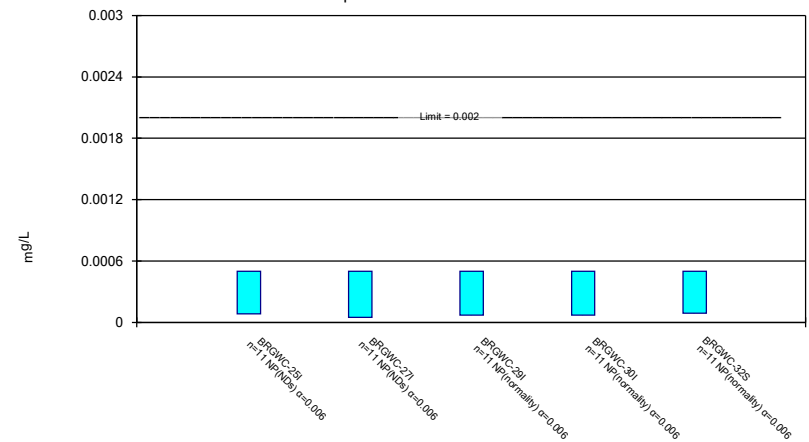
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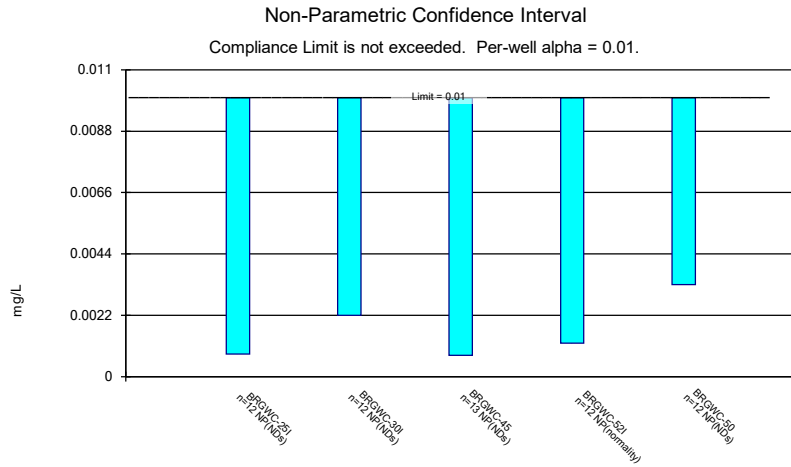
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Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

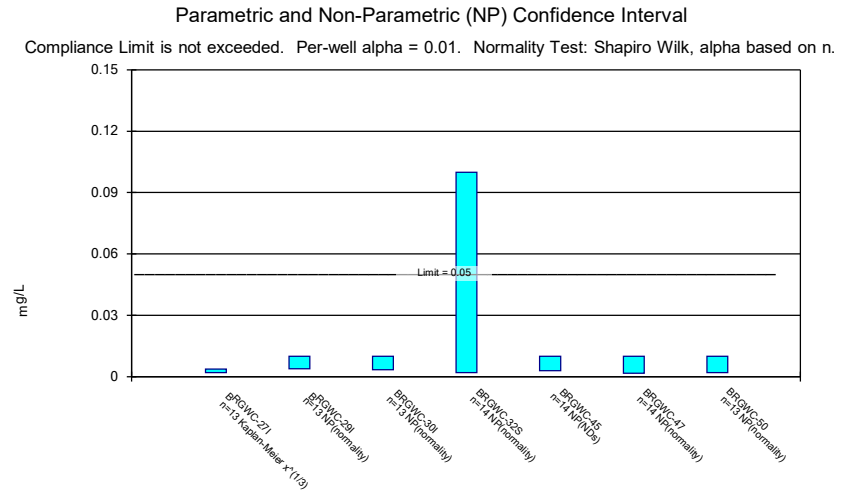
Compliance Limit is not exceeded.



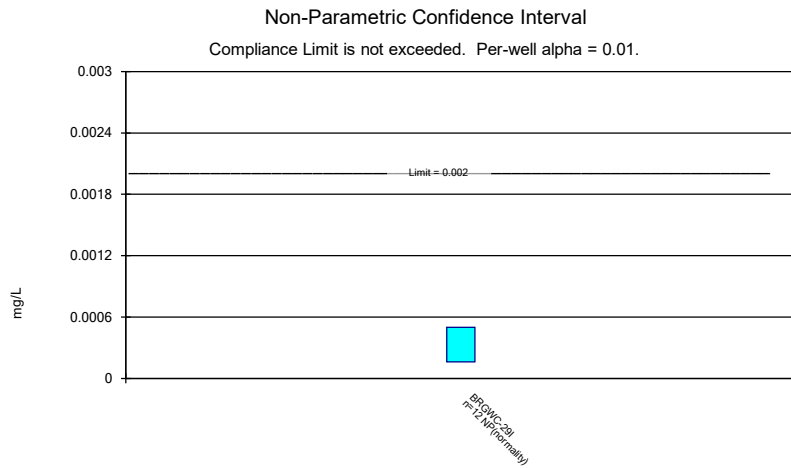
Constituent: Mercury Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D
Plant Branch Client: Southern Company Data: Plant Branch AP



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

APPENDIX C

**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

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Submitted by:

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February 26, 2021

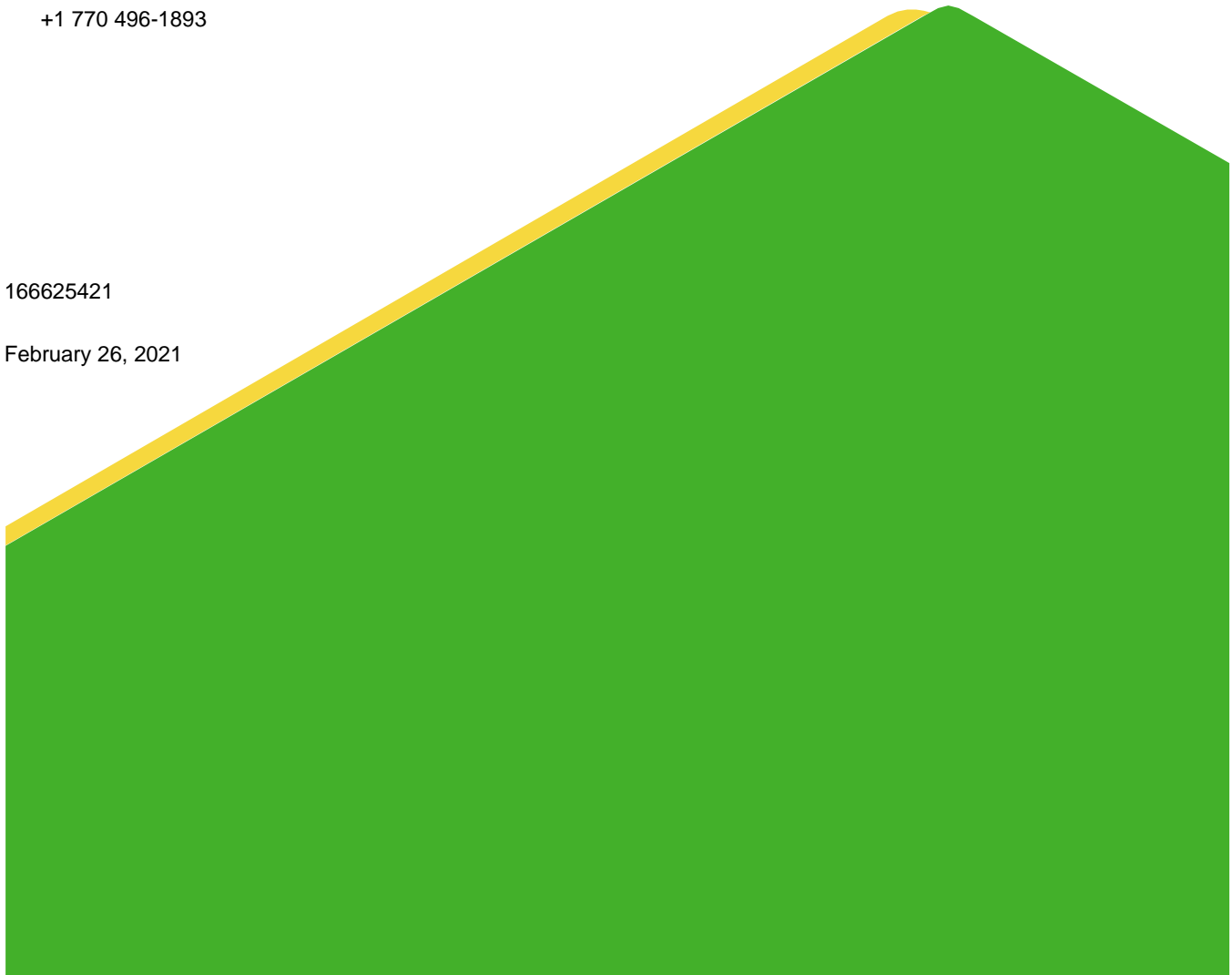


Table of Contents

1.0 INTRODUCTION	3
2.0 POND CLOSURE ACTIVITIES	4
3.0 SUMMARY OF WORK COMPLETED	4
3.1 Nature and Extent Delineation	4
3.2 Supplemental Data Collection	5
4.0 UPDATED SITE CONCEPTUAL SITE MODEL	6
5.0 CORRECTIVE MEASURES ALTERNATIVES	7
6.0 PLANNED ACTIVITIES AND ANTICIPATED SCHEDULE	8
7.0 REFERENCES	9

TABLES

Table 1:	Evaluation of Remedial Technologies
Table 2A:	Monitoring Well Network Summary
Table 2B:	Piezometer Network Summary
Table 3A:	Analytical Data Summary – Surface Water - October 2020
Table 3B:	Analytical Data Summary – Surface Water - February 2021
Table 4:	Proposed ACM Supplementary Data Collection Tasks for 2021

FIGURES

Figure 1:	Site Location Map
Figure 2:	Monitoring Well, Piezometer and Surface Water Location Map
Figure 3:	Potentiometric Surface Elevation Contour Map – September 2020
Figure 4:	Cadmium Isoconcentration Contour Map Pond BCD – September 2020
Figure 5:	Cobalt Isoconcentration Contour Map Pond BCD – September 2020

APPENDICES

Appendix A:	Sequential Extraction Procedure Results, X-Ray Diffraction, Surface Water, and Porewater Laboratory Analytical Results
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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.



Brian Steele, PG
Senior Project Geologist



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Georgia Licensed Professional Engineer No. 025799

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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 rules are 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 are not subject to the US EPA CCR Rule.

Pursuant to § 257.96, Georgia Power initiated an ACM for AP-BCD on July 9, 2020, to address the occurrence of cadmium and cobalt 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). Georgia Power conducted a human health and ecological risk evaluation to evaluate constituents that exhibit SSLs in groundwater at AP-BCD. The results indicated concentrations of cadmium and cobalt detected in groundwater at former AP-BCD are not expected to pose a risk to human health or the environment (Geosyntec, 2020).

Pursuant to 40 CFR 257.97, Georgia Power is evaluating the potential corrective measures presented in the ACM report to identify 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
- Monitored Natural Attenuation (MNA)
- Permeable Reactive Barrier (PRB)
- 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.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Golder, 2020) to support the groundwater remedy selection process and address potential changes in site conditions as appropriate. 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 (US EPA, 2015) summarized below.

- Tier I:** Constituent concentrations & plume stability
- Tier II:** Constituent attenuation mechanisms
- Tier III:** Aquifer capacity and stability
- Tier IV:** Performance monitoring

2.0 POND CLOSURE ACTIVITIES

Georgia Power retired Plant Branch in 2015 and began a dewatering process that is necessary to facilitate permanent closure of the ash ponds. 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 WORK COMPLETED

The following section summarizes a series of field investigation activities and data collection completed to date 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. An evaluation of these data as they relate to remedy selection alternatives will be presented in the next semi-annual report.

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 2020 assessment monitoring groundwater data show statistically significant levels (SSLs), as presented in Table 3.1, at concentrations exceeding the state and/or federal Groundwater Protection Standards (GWPS). Details are provided in the 2020 Annual Groundwater Monitoring and Corrective Action Report (Golder, 2020b).

Table 3.1: AP-BCD Statistically Significant Level Exceedances

AP-BCD Monitoring Well	Appendix IV Parameter
BRGWC-50	Cobalt, Cadmium

The locations of the site monitoring wells and piezometers are shown on Figure 2. Table 2A and 2B provide 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, 2020c; Golder, 2020d). A potentiometric surface map illustrating the September 2020 potentiometric surface elevations is provided on Figure 3.

To characterize the nature and extent of target SSL constituents, shallow and deep piezometers were installed and sampled for analysis of Appendix III constituents, target Appendix IV constituents cadmium and cobalt, and cations/anions (bicarbonate/carbonate alkalinity, sodium, magnesium, and potassium). In addition, surface water was sampled at multiple locations for the same analysis mentioned above, to demonstrate horizontal delineation in surface water bodies where proximity to surface water and topography prevented conventional installation of additional wells. Figure 2 shows the locations of the monitoring wells and surface water sample locations. Figure 4 and Figure 5 present the horizontal delineation of each of the constituents where SSLs have been observed.

Horizontal and Vertical Delineation Well Installation

Data from horizontal delineation well PZ-51I show concentrations of cadmium and cobalt exceeding site background concentrations during the August to December 2020 reporting period (Golder, 2020b). However, statistical analysis of the Appendix IV data is pending until four sampling events are completed to construct the confidence intervals required to evaluate and confirm potential SSLs. Georgia Power will continue to monitor the delineation wells and adaptively manage the Site as new data become available.

Vertical delineation wells were installed within the weathered/fractured bedrock, adjacent to locations BRGWC-50 (PZ-50D) and PZ-51I (PZ-51D) resulting in a shallow and deep well pair at each of these locations. In November 2020, groundwater samples were collected from newly installed delineation wells PZ-50D and PZ-51D and analyzed for Appendix III and targeted Appendix IV constituents (i.e., cadmium and cobalt).

Surface Water Sampling

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. In response, Georgia Power proactively collected surface water samples from Lake Sinclair downgradient of AP-BCD on October 22, 2020, and February 4th, 2021. The October 22, 2020 data were provided with the ACM Report (Golder, 2020a). Results of these sampling events are presented in Appendix A and summarized on Tables 3A and 3B. Results indicate that horizontal delineation for cadmium and cobalt BRGWC-50 is complete.

Groundwater Sampling

Evaluation of data collected in November 2020 from wells PZ-50D, PZ-51I, and PZ-51D as it relates to evaluation of remedy selection alternatives will be presented in a future report. These data were provided with the ACM Report (Golder, 2020a).

3.2 Supplemental Data Collection

Additional field investigation activities and data analyses have been performed to evaluate possible remedial alternatives. A summary of these data is included below.

Mineralogical Analysis

The mineralogical composition of soil and rock samples from six boreholes located around AP-BCD and AP-E was assessed using quantitative XRD with Rietveld refinement. Two samples were collected within similar depth

intervals as the screened interval of BRGWC-50. Cores from background borings BRGWA-2S, BRGWA-5S, and BRGWA-6S, located around AP-E, were included to determine the general mineralogy of bedrock and soils. The purpose of the mineralogical analysis was to identify and quantify the crystalline mineral phases in each sample.

Results of these analyses are presented in Appendix A, Laboratory Analytical Results. Evaluation of these data as it relates to evaluation of remedy selection alternatives will be presented in a future report(s).

Chemical Analysis and Sequential Extraction

Chemical analysis of soils/rock for total metals and Sequential Extraction Procedure (SEP) analysis was conducted on twelve solid samples (collected from five upgradient boreholes and one downgradient borehole) surrounding AP-BCD, and AP-E. The SEP consists of a seven-step metals extraction from solids to determine their potential environmental stability. The seven-step SEP is defined by specific extraction steps based on a modified Tessier method (Tessier et al., 1979).

Results of these analyses are presented in Appendix A, Laboratory Analytical Results. Evaluation of this data as it relates to evaluation of remedy selection alternatives 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 of aquifer materials encountered at the site to aid in further evaluation of remedial alternatives. A summary of the aquifer testing data, analysis methods, and the calculated geometric mean for hydraulic conductivity will be presented in the next Semi-Annual Remedy Selection Progress Report. 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, and support assessment of certain groundwater corrective measures, such as hydraulic containment, MNA, or in-situ injections.

Porewater Sampling

Piezometers screened in CCR material was sampled for porewater from within AP-BCD and analyzed for Appendix III constituents, Appendix IV constituents, and cations and anions, from piezometers IW-D-2, IW-C-1, IW-C-2, and IW-B-2 in October 2019. These piezometers are screened in the CCR material in AP-BCD. Results of these analyses are presented in Appendix A, Laboratory Analytical Results. Porewater samples are scheduled to be collected from piezometers IW-B-1 and IW-B-2 will be sampled in March 2021 for Appendix III constituents, Appendix IV constituents, and cations and anions.

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 conceptual site model (CSM). The following bullets summarize the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-BCD.

- The September 2020 potentiometric surface for the uppermost aquifer shows groundwater flow generally eastward from the topographically high area upgradient of Pond E, as shown on Figure 3. In general, groundwater flow is to the east, south, and west from Ponds B, C, and D. The latest water level data collected in 2020 confirmed groundwater in the uppermost aquifer to be consistent with the CSM. Additional data (e.g., slug tests) will be evaluated as collected to determine consistency with the CSM.

- In general, the geochemistry for the site is fairly uniform except for local mafic units within the gneiss. These differing rock types are interlayered such that they are not likely to result in significant geochemical variation in the overburden and groundwater chemistry. The boring logs from the vertical delineation wells PZ-50D and PZ-51D confirmed geology consistent with that presented in the CSM (i.e., biotite gneiss).

5.0 CORRECTIVE MEASURES ALTERNATIVES

Based on the data collected to date, four of the six 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 being presented as part of the ACM Report. Table 4 provides a summary of additional data to be collected. The progress toward additional data collection and the retention evaluation (not retained) for each potential remedial alternative is listed below and included on Table 4.

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 flow passes through the media. PRB walls are normally keyed into the bedrock. Well 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.

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 feet below ground surface (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.

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 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 tiered approach for the use of MNA in groundwater.

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. At this time, and as discussed in Section 4.0, four of the corrective measures outlined in the 2020 ACM Report are being retained for further evaluation. The four corrective measures which are being retained are as follows:

- Geochemical Approaches (In-Situ Injection)
- Hydraulic Containment (Pump and Treat)
- In-Situ Solidification/Stabilization (ISS)
- Monitored Natural Attenuation (MNA)

Supplementary data collection and evaluation activities proposed to be completed are presented on Table 4, with the key elements summarized below.

- Additional borings and piezometers will be evaluated to characterize the nature and extent. New delineation wells are planned for installation with conventional and non-conventional drilling techniques.
- Groundwater samples will be collected from the existing detection and assessment well network as well as additional wells in the migration pathway to evaluate geochemical characteristics of the aquifer. In addition to Appendix III/IV constituents, wells may also be analyzed for major cations/anions and other parameters for characterization of groundwater and evaluating the potential remedies.
- Groundwater flow conditions will be evaluated based on data collected from newly installed horizontal and vertical delineation wells.
- Evaluate data from previously collected and newly collected samples for attenuation mechanism and rates, aquifer capacity for attenuation, and mineralogical characterization.

Georgia Power will continue to prepare semi-annual progress reports to document AP-BCD groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future 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
Plant Branch - Milledgeville, GA

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Description	Performance	Reliability
Geochemical Approaches (in situ injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of cadmium (Cd) and cobalt (Co). 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.
Hydraulic Containment (pump- and-treat)	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse [e.g., land application, 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
In-Situ Stabilization	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.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Co and Cd at AP-BCD are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation, and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Cd, the main attenuation processes include sorption to iron and manganese oxides (Co and Cd), and formation of sparingly soluble sulfide minerals (Co).	Physical and chemical MNA mechanisms for 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.
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. 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.	PRBs have been shown to effectively address Co and Cd in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for concurrent removal/immobilization of these constituents. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Cadmium redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for Co. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Cd.	Reliable groundwater corrective measure technology, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier. Though highly effective, vertical barrier walls may serve as groundwater dams, so mounding of groundwater behind barrier walls, or flow of groundwater around the ends of barrier walls, should be considered in corrective action design.	Barrier walls are a proven technology for groundwater cutoff at impoundments. 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.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.

TABLE 1 - EVALUATION OF REMEDIAL TECHNOLOGIES
Plant Branch - Milledgeville, GA

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
Geochemical Approaches (in situ injection)	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.
Hydraulic Containment (pump- and-treat)	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.
In-Situ Stabilization	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.
MNA	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.
PRB	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.
Subsurface Vertical Barrier Walls	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 (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
Plant Branch - Milledgeville, GA

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)			
	Institutional Requirements	Other Env. Or Public Health Requirements	Relative Costs	Retention Evaluation
Geochemical Approaches (in situ injection)	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 anaerobic 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.
Hydraulic Containment (pump-and-treat)	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.
In-Situ Stabilization	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.	A solidification technology may potentially be used on the CCR material prior to removal, as a means of moving the material to the onsite landfill; therefore, ISS will be retained for further evaluation.
MNA	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.
PRB	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.
Subsurface Vertical Barrier Walls	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 2A MONITORING WELL NETWORK SUMMARY

Georgia Power - Plant Branch
Milledgeville, GA

Well-ID	Hydraulic Location	Geologic Unit Screened ^[1]	NAD 83 Northing ^[1]	NAD 83 Easting ^[1]	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) ^[2]	Top of Casing Elevation (feet NAVD88) ^[2]	Total Depth (feet bgs) ^[2]	Top of Screen Elevation (feet NAVD88) ^[2]	Bottom of Screen Elevation (feet NAVD88) ^[2]	Top of Seal Elevation (feet NAVD88) ^[2]	Top of Filter Pack Elevation (feet NAVD88) ^[2]	Bottom of Well Elevation (feet NAVD88) ^[2]	Screen Length (feet)	Date of Installation
ASH POND BCD MONITORING WELL NETWORK																
BRGWA-2S	Upgradient BCD & E	Saprolite	1167139.7	2549952.6	33.205940	-83.338294	440.4	443.20	44.6	406.2	396.2	410.4	408.4	395.8	10.0	4/2/2014
BRGWA-2I	Upgradient BCD & E	Amphibolite Gneiss	1167130.0	2549957.3	33.205913	-83.338279	440.5	443.14	64.3	386.6	376.6	391.9	389.9	376.2	10.0	3/14/2014
BRGWA-5S	Upgradient BCD & E	Saprolite	1170177.5	2549415.5	33.214300	-83.339971	440.8	443.86	40.0	411.2	401.2	415.2	412.2	400.8	10.0	4/3/2014
BRGWA-5I	Upgradient BCD & E	Amphibolite Gneiss	1170183.7	2549408.0	33.214317	-83.339996	441.1	443.79	61.2	390.3	380.3	395.1	393.1	379.9	10.0	4/3/2014
BRGWA-6S	Upgradient BCD & E	Saprolite	1170732.9	2551540.8	33.215780	-83.333008	455.8	458.96	49.7	416.5	406.5	420.8	418.6	406.1	10.0	4/1/2014
BRGWA-12S	Upgradient BCD	Residuum	1164286.6	2557142.9	33.197941	-83.314864	431.6	434.64	58.3	383.7	373.7	389.6	386.6	373.3	10.0	3/4/2014
BRGWA-12I	Upgradient BCD	Biotite Gneiss	1164301.2	2557138.9	33.197981	-83.314877	431.5	434.39	77.6	364.3	354.3	375.5	366.6	353.9	10.0	2/20/2014
BRGWA-23S	Upgradient BCD	Saprolite/TWR	1162971.7	2557868.1	33.194311	-83.312528	425.5	428.24	40.8	394.7	384.7	403.0	398.0	384.7	10.0	7/26/2016
BRGWC-25I	Downgradient B	Saprolite/TWR/Biotite Gneiss	1160583.7	2561315.1	33.187670	-83.301326	355.0	357.37	20.5	344.5	334.5	352.5	347.5	334.5	10.0	7/25/2016
BRGWC-27I	Downgradient C	Saprolite	1159695.3	2559712.2	33.185265	-83.306589	364.0	366.86	24.0	350.0	340.0	360.0	355.0	340.0	10.0	7/22/2016
BRGWC-29I	Downgradient C	TWR	1160297.6	2561050.2	33.186890	-83.302200	350.6	353.23	20.0	340.6	330.6	348.6	343.6	330.6	10.0	7/23/2016
BRGWC-30I	Downgradient D	Saprolite/TWR/Biotite Gneiss	1161607.6	2557691.8	33.190566	-83.313141	350.0	352.61	20.3	340.0	330.0	348.0	343.0	329.8	10.0	7/18/2016
BRGWC-32S	Downgradient D	Saprolite	1160677.7	2558497.9	33.187992	-83.310531	403.6	406.39	45.0	368.6	358.6	376.6	371.6	358.6	10.0	7/20/2016
BRGWC-45	Downgradient B	Saprolite/TWR/Biotite Gneiss	1162229.8	2561075.5	33.192199	-83.302065	381.6	384.58	57.0	335.0	325.0	341.6	336.6	324.6	10.0	2/3/2018
BRGWC-47	Downgradient D	TWR	1162700.7	2559456.7	33.193530	-83.307343	408.8	411.20	92.0	327.2	317.2	333.8	328.8	316.8	10.0	1/25/2018
BRGWC-50	Downgradient B	Residuum/Biotite Gneiss	1161593.3	2562372.9	33.190421	-83.297841	378.8	381.35	65.0	324.2	314.2	330.8	325.8	313.8	10.0	1/31/2018
BRGWC-52I	Downgradient B	Biotite Gneiss	1161275.0	2562145.3	33.189551	-83.298594	381.2	383.87	73.9	317.3	307.3	330.8	321.5	307.3	10.0	8/6/2018
ASH POND BCD ASSESSMENT WELLS																
PZ-50D	Downgradient	Biotite Gneiss	1161588.9	2562381.2	33.190410	-83.297817	378.3	380.86	106.0	282.3	272.3	288.6	284.4	272.3	10.0	10/8/2020
PZ-51I	Downgradient	Saprolite/TWR/Biotite Gneiss	1161631.1	2562439.3	33.190523	-83.297623	378.0	380.52	65.0	323.1	313.1	328.8	325.5	313.0	10.0	8/1/2018

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. Wells resurveyed by Metro Engineering & Surveying Co., Inc between June-July 2020

**TABLE 2B
PIEZOMETER NETWORK SUMMARY**

Georgia Power - Plant Branch
Milledgeville, GA

Well-ID	Hydraulic Location	Geologic Unit Screened (B)	NAD 83 Northing ⁽¹⁾	NAD 83 Easting ⁽¹⁾	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) ⁽¹⁾	Top of Casing Elevation (feet NAVD88) ⁽¹⁾	Total Depth (feet bgs) ⁽²⁾	Top of Screen Elevation (feet NAVD88) ⁽¹⁾	Bottom of Screen Elevation (feet NAVD88) ⁽¹⁾	Top of Seal Elevation (feet NAVD88) ⁽¹⁾	Top of Filter Pack Elevation (feet NAVD88) ⁽¹⁾	Bottom of Well Elevation (feet NAVD88) ⁽¹⁾	Screen Length (feet)	Date of Installation
PZ-1D	Upgradient	Biotite Gneiss	1171999.0	2551598.1	33.219259	-83.332788	462.9	463.41	160.0	NA ⁽⁴⁾	302.9	NA	NA	302.9	NA	4/4/2014
PZ-1I	Upgradient	Biotite Gneiss	1171995.8	2551577.8	33.219250	-83.332855	461.9	464.71	79.5	392.8	382.8	398.8	394.7	382.4	10.0	3/10/2014
PZ-1S	Upgradient	Saprolite	1171996.4	2551588.0	33.219251	-83.332821	462.4	465.07	65.0	407.8	397.8	431.4	424.3	397.4	10.0	3/20/2014
PZ-3D	Upgradient	Biotite Gneiss	1165474.4	2550275.1	33.201356	-83.337283	486.7	487.50	130.0	NA	358.6	NA	NA	356.7	NA	3/27/2014
PZ-3I	Upgradient	Biotite Gneiss	1165494.5	2550273.2	33.201412	-83.337289	486.5	489.49	54.6	442.3	432.3	450.5	445.7	431.9	10.0	3/11/2014
PZ-3S	Upgradient	Saprolite	1165484.5	2550274.6	33.201384	-83.337284	487.0	490.53	39.9	457.5	447.5	464.6	461.0	447.1	10.0	3/11/2014
PZ-4I	Upgradient	Biotite Gneiss	1163246.8	2551282.0	33.195212	-83.334049	479.9	482.98	46.8	443.5	433.5	451.4	446.3	433.1	10.0	3/11/2014
PZ-4S	Upgradient	Saprolite	1163247.8	2551270.1	33.195216	-83.334088	479.9	482.87	30.0	460.3	450.3	466.4	462.9	449.9	10.0	3/10/2014
PZ-7S	Downgradient	Saprolite	1169419.2	2553055.6	33.212137	-83.328090	449.0	451.57	44.5	414.9	404.9	419.0	417.0	404.5	10.0	4/1/2014
PZ-8S	Upgradient	Saprolite	1167801.1	2551188.9	33.207731	-83.334235	450.5	453.08	49.5	411.4	401.4	414.5	412.5	401.0	10.0	4/1/2014
PZ-9S	Upgradient	Saprolite	1162633.3	2553089.6	33.193487	-83.328157	466.1	469.28	48.0	428.5	418.5	435.6	431.5	418.1	10.0	3/5/2014
PZ-10S	Downgradient	Saprolite	1164021.5	2554990.5	33.197260	-83.321907	431.0	433.85	39.0	402.4	392.4	407.5	405.0	392.0	10.0	3/5/2014
PZ-11S	Downgradient	Saprolite	1162467.3	2557002.5	33.192944	-83.315371	390.9	393.99	24.5	376.8	366.8	382.9	380.9	366.4	10.0	2/20/2014
PZ-12D	Downgradient	Biotite Gneiss	1164311.9	2557136.4	33.198010	-83.314885	431.4	434.09	141.7	350.1	290.1	376.0	359.4	289.7	60.0	4/14/2014
PZ-13S	Downgradient	Saprolite	1168011.4	2555276.7	33.208218	-83.320866	406.5	409.97	34.7	382.2	372.2	386.3	384.3	371.8	10.0	3/19/2014
PZ-14I	Downgradient	Biotite Gneiss	1168398.2	2554365.6	33.209302	-83.323834	419.9	422.71	53.8	376.5	366.5	382.6	380.2	366.1	10.0	3/20/2014
PZ-14S	Downgradient	Saprolite	1168398.7	2554359.2	33.209303	-83.323855	420.2	423.31	37.6	393.0	383.0	397.1	395.1	382.6	10.0	3/20/2014
PZ-15I	Downgradient	Biotite Gneiss/Amphibolite	1167720.9	2554399.2	33.207440	-83.323742	400.2	403.06	88.7	321.9	311.9	327.2	325.2	311.5	10.0	3/25/2014
PZ-15S	Downgradient	Saprolite	1167720.3	2554394.0	33.207438	-83.323759	400.1	402.90	39.9	370.2	360.2	374.6	372.2	360.2	10.0	3/27/2014
PZ-16I	Downgradient	Amphibolite Gneiss	1166980.7	2554587.5	33.205401	-83.323146	379.5	382.45	38.6	351.3	341.3	355.1	353.1	340.9	10.0	3/14/2014
PZ-16S	Downgradient	Saprolite	1166977.8	2554581.4	33.205393	-83.323166	379.3	382.52	19.1	370.6	360.6	374.3	372.3	360.2	10.0	3/18/2014
PZ-17I	Downgradient	Amphibolite Gneiss	1166313.8	2554702.5	33.203566	-83.322788	362.3	365.33	43.5	329.2	319.2	333.5	330.2	318.8	10.0	3/17/2014

TABLE 2B
PIEZOMETER NETWORK SUMMARY
 Georgia Power - Plant Branch
 Milledgeville, GA

Well-ID	Hydraulic Location	Geologic Unit Screened (B)	NAD 83 Northing ⁽¹⁾	NAD 83 Easting ⁽¹⁾	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) ⁽¹⁾	Top of Casing Elevation (feet NAVD88) ⁽¹⁾	Total Depth (feet bgs) ⁽²⁾	Top of Screen Elevation (feet NAVD88) ⁽¹⁾	Bottom of Screen Elevation (feet NAVD88) ⁽¹⁾	Top of Seal Elevation (feet NAVD88) ⁽¹⁾	Top of Filter Pack Elevation (feet NAVD88) ⁽¹⁾	Bottom of Well Elevation (feet NAVD88) ⁽¹⁾	Screen Length (feet)	Date of Installation
PZ-18I	Downgradient	Biotite Gneiss	1160766.2	2557745.5	33.188252	-83.312988	359.6	362.55	38.4	331.3	321.3	339.6	333.3	321.2	10.0	2/26/2014
PZ-18S	Downgradient	Saprolite	1160757.3	2557747.4	33.188228	-83.312982	359.7	362.82	24.2	345.0	335.0	350.2	348.1	335.5	10.0	3/26/2014
PZ-19I	Downgradient	Biotite Gneiss	1159797.1	2558900.0	33.185563	-83.309241	368.9	371.74	43.7	335.6	325.6	341.3	338.3	325.2	10.0	3/4/2014
PZ-19S	Downgradient	Saprolite	1159805.4	2558894.5	33.185586	-83.309258	368.4	371.42	28.0	350.8	340.8	355.1	352.7	340.4	10.0	3/4/2014
PZ-20I	Downgradient	Biotite Gneiss	1159495.4	2560160.2	33.184705	-83.305130	362.2	365.34	29.5	343.1	333.1	348.1	345.8	332.7	10.0	3/5/2014
PZ-20S	Downgradient	Saprolite	1159490.3	2560157.0	33.184691	-83.305140	362.2	365.41	15.3	357.3	347.3	361.2	359.2	346.9	10.0	3/5/2014
PZ-21I	Downgradient	Biotite Gneiss	1160591.6	2561328.2	33.187691	-83.301283	355.8	358.92	24.4	341.8	331.8	346.0	344.0	331.4	10.0	3/10/2014
PZ-21S	Downgradient	Residuum/Saprolite	1160592.4	2561321.3	33.187694	-83.301305	355.5	358.52	9.8	351.1	346.1	355.4	353.5	345.7	5.0	3/11/2014
PZ-23I	Downgradient	Biotite Gneiss	1162975.4	2557877.7	33.194321	-83.312497	425.1	427.74	66.5	368.6	358.6	376.6	371.1	358.6	10.0	7/29/2016
PZ-24S	Downgradient	Saprolite	1162400.9	2562862.2	33.192629	-83.296220	351.4	354.10	42.0	319.9	309.9	327.9	322.9	309.4	10.0	7/27/2016
PZ-26I	Downgradient	Biotite Gneiss	1160669.0	2561626.4	33.187898	-83.300306	368.0	370.63	30.5	347.5	337.5	356.0	351.0	337.5	10.0	7/26/2016
PZ-28I	Downgradient	TWR/Biotite Gneiss	1159505.1	2560151.7	33.184732	-83.305158	362.5	364.81	24.0	348.5	338.5	356.5	351.5	338.5	10.0	7/24/2016
PZ-31S	Downgradient	TWR	1160936.9	2557971.8	33.188716	-83.312244	374.3	376.77	39.5	344.8	334.8	352.8	347.8	334.8	10.0	7/26/2016
PZ-39	Downgradient	Saprolite	1163675.4	2557460.5	33.196254	-83.313842	432.0	434.78	44.7	397.3	387.3	405.8	400.6	387.3	10.0	7/30/2016
PZ-40S	Downgradient	Residuum	1162414.9	2562807.7	33.192669	-83.296398	353.2	355.96	40.2	324.4	314.4	328.5	325.4	313.0	10.0	2/14/2017
PZ-41S	Downgradient	Saprolite	1162431.8	2562759.4	33.192716	-83.296555	354.3	357.17	44.2	320.5	310.5	325.0	322.3	310.1	10.0	2/14/2017
PZ-42S	Downgradient	Residuum	1162845.7	2562735.0	33.193854	-83.296624	359.0	361.66	32.2	337.2	327.2	345.0	342.8	326.8	10.0	2/9/2017
PZ-43	Downgradient	Residuum/Biotite Gneiss	1162159.8	2562031.3	33.191985	-83.298942	381.0	383.71	40.4	351.0	341.0	358.0	353.0	340.6	10.0	2/7/2018
PZ-44	Downgradient	Saprolite/TWR/Biotite Gneiss	1161724.6	2561587.5	33.190799	-83.300405	380.5	383.04	57.0	333.9	323.9	340.5	335.5	323.5	10.0	2/2/2018
PZ-46	Downgradient	Saprolite/TWR/Biotite Gneiss	1162756.2	2560559.0	33.193658	-83.303739	382.1	384.64	45.6	346.5	336.5	353.1	348.1	336.5	10.0	2/5/2018
PZ-48	Downgradient	Saprolite/TWR/Amphibolite	1163046.7	2558444.6	33.194504	-83.310642	418.3	420.90	67.0	361.7	351.7	368.3	363.3	351.3	10.0	1/24/2018
PZ-49	Downgradient	Residuum/Biotite Gneiss	1163321.2	2561125.7	33.195198	-83.301871	382.2	384.99	17.0	375.6	365.6	379.7	377.2	365.2	10.0	1/30/2018
PZ-50D ⁽⁷⁾	Downgradient	Biotite Gneiss	1161588.9	2562381.2	33.190410	-83.297817	378.3	380.86	106.0	282.3	272.3	288.6	284.4	272.3	10.0	10/8/2020
PZ-51S	Downgradient	Residuum	1161613.4	2562433.1	33.190474	-83.297644	377.9	380.27	45.4	337.9	332.9	344.7	342.2	332.5	5.0	8/1/2018
PZ-51I ⁽⁷⁾	Downgradient	Saprolite/TWR/Biotite Gneiss	1161631.1	2562439.3	33.190523	-83.297623	378.0	380.52	65.0	323.1	313.1	328.8	325.5	313.0	10.0	8/1/2018
PZ-51D	Downgradient	Biotite Gneiss	1161639.8	2562434.0	33.190548	-83.297643	378.1	380.75	106.0	282.1	272.1	288.6	284.5	272.1	10.0	10/9/2020
PZ-52D	Downgradient	Biotite Gneiss	1168053.9	2554051.7	33.208362	-83.324870	414.3	417.03	59.5	364.8	354.8	371.3	367.3	354.8	10.0	5/14/2020
PZ-53D	Downgradient	Saprolite/TWR/Biotite Gneiss	1164393.8	2554984.3	33.198283	-83.321917	431.6	434.68	139.4	302.2	292.2	310.6	305.0	292.2	10.0	5/17/2020
PZ-54	Downgradient	Saprolite/TWR	1164828.7	2555458.3	33.199468	-83.320356	440.8	443.86	52.0	398.8	388.8	404.3	400.8	388.8	10.0	5/15/2020
PZ-55	Downgradient	Saprolite/TWR/Biotite Gneiss	1163208.0	2554783.6	33.195029	-83.322604	450.2	453.07	49.3	410.9	400.9	416.2	413.8	400.9	10.0	5/19/2020
PZ-56	Downgradient	Saprolite/TWR/Biotite Gneiss	1162965.1	2554086.3	33.194377	-83.324890	416.2	418.84	29.3	396.9	386.9	402.7	399.2	386.9	10.0	5/20/2020
PB-15	Downgradient	Saprolite/PWR	1164910.5	2556355.9	33.199673	-83.317420	400.4	403.16	38.0	372.4	362.4	377.4	374.4	362.4	10.0	1/22/2019
PB-2D	Downgradient	Gneiss	1164853.6	2556914.2	33.199504	-83.315596	414.9	416.71	57.0	367.9	357.9	374.9	370.9	357.9	10.0	12/4/2018
PB-4S	Downgradient	Saprolite/PWR	1164335.1	2556069.2	33.198098	-83.318372	409.3	411.15	48.0	371.3	361.3	378.3	372.3	361.3	10.0	1/16/2019
PB-4D	Downgradient	Gneiss	1164339.6	2556060.7	33.198110	-83.318400	409.0	412.12	114.5	304.5	294.5	311.0	306.0	294.5	10.0	1/16/2019
PB-7S	Downgradient	Saprolite/PWR	1163831.3	2556186.2	33.196710	-83.318003	399.7	402.88	33.0	376.7	366.7	381.7	378.7	366.7	10.0	1/14/2019
PB-8S	Downgradient	Saprolite/PWR	1163018.2	2556792.3	33.194463	-83.316044	398.6	401.82	35.0	373.6	363.6	378.6	375.6	363.6	10.0	1/8/2018
PB-8D	Downgradient	Gneiss	1163024.4	2556786.7	33.194480	-83.316062	398.2	401.74	106.0	304.2	294.2	307.2	302.2	294.2	10.0	1/8/2018
PB-10S	Downgradient	Saprolite	1163588.9	2558551.2	33.195992	-83.310279	397.6	400.91	33.0	374.6	364.6	379.6	376.6	364.6	10.0	1/16/2019
PB-10D	Downgradient	Gneiss	1163593.4	2558546.7	33.196004	-83.310294	397.5	400.31	85.0	322.5	312.5	328.5	324.5	312.5	10.0	1/16/2019
PB-13S	Downgradient	Saprolite	1162084.4	2556626.1	33.191900	-83.316612	370.8	373.31	50.0	330.8	320.8	335.8	332.8	320.8	10.0	12/10/2018
PB-13D	Downgradient	Gneiss	1162084.5	2556638.8	33.191900	-83.316570	371.1	373.77	97.0	284.1	274.1	295.1	291.1	274.1	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.
 6. Wells resurveyed by Metro Engineering & Surveying Co., Inc between June-July 2020
 7. AP-BCD Assessment Well



TABLE 3A
ANALYTICAL DATA SUMMARY
Surface Water - October 2020
 Georgia Power - Plant Branch
 Milledgeville, Georgia

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
Appendix III					
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
Appendix IV					
Cadmium, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050
Other					
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 ₃)	mg/L	24.2	25.6	25.8	26.5
Alkalinity, Total (CaCO ₃)	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 3B
ANALYTICAL DATA SUMMARY
Surface Water - February 2021
Georgia Power - Plant Branch
Milledgeville, Georgia

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
Appendix III						
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
Appendix IV						
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
Cations/Anions						
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 ₃)	mg/L	25.8	24.3	24.2	24.9	24.6
Alkalinity, Total (CaCO ₃)	mg/L	25.8	24.3	24.2	24.9	24.6
Field Parameters						
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 4
PROPOSED ACM SUPPLEMENTAL DATA COLLECTION TASKS FOR 2021
 Georgia Power – Plant Branch AP-BCD
 Milledgeville, Georgia

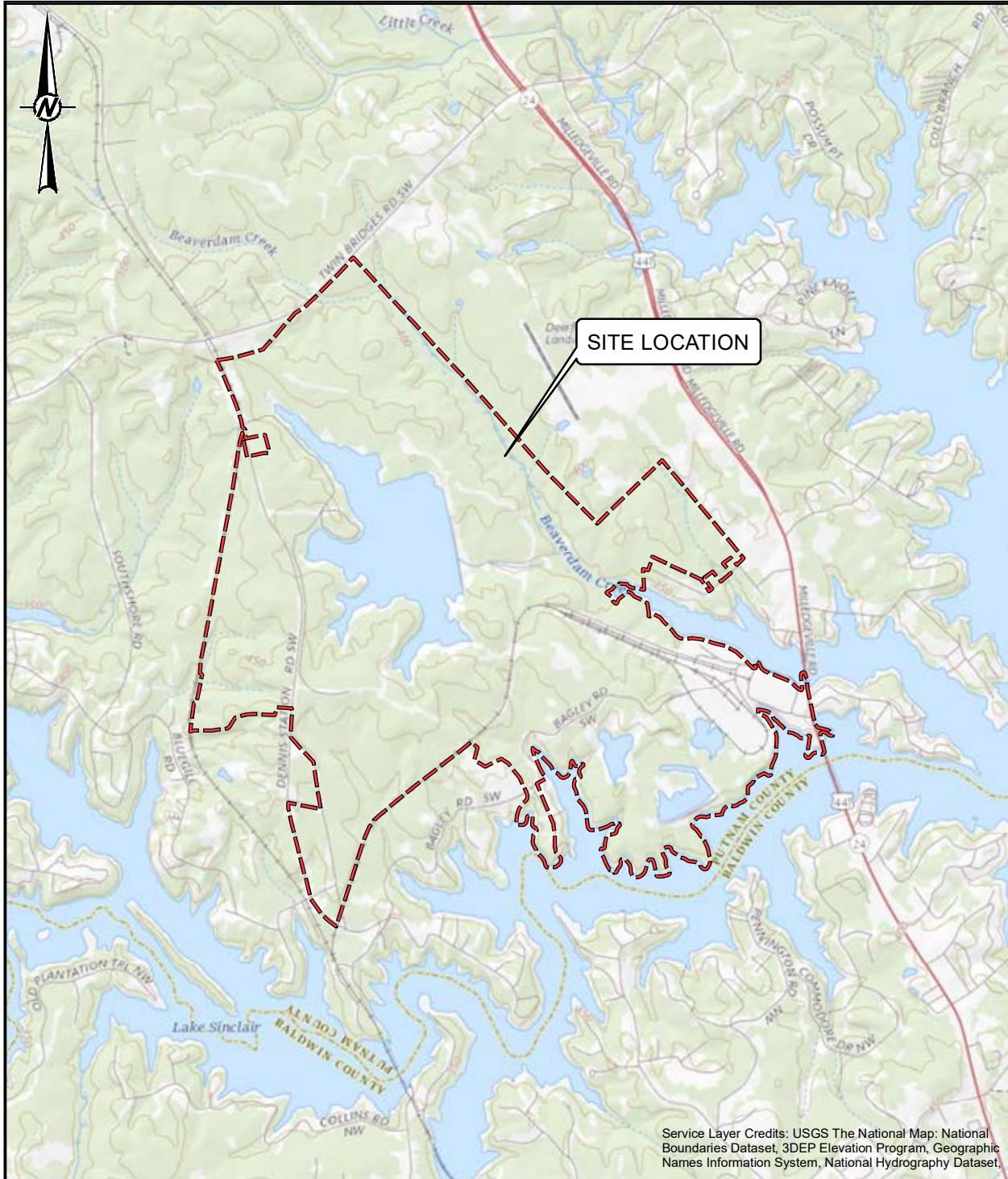
Data Collection Event	Applicable CMs	Applicability / Rationale	Field Component	Parameters of Interest (POI)
Well Installation	ISI P&T ISS MNA	Evaluation of: Nature and extent of cobalt and cadmium near BRGWC-50.	Install 2 to 5 piezometers (40 – 80 feet deep) to evaluate the spatial concentrations of target constituents near BRGWC-50.	Characterize cobalt and cadmium concentrations spatially between the AP-B and well BRGWC-50.
Groundwater Sampling	ISI P&T ISS MNA	Evaluation of: (i) attenuation mechanisms and rates and aquifer capacity for attenuation (ii) in situ conditions to establish evaluate geochemical injection options downgradient of unit.	Collect groundwater samples from existing well network currently sampled under the assessment monitoring program as well as additional site piezometers within migration pathway.	In addition to routine App III/IV parameters: total phosphorous, sulfide, iron, manganese, magnesium, sodium, potassium, total alkalinity, bicarbonate, dissolved organic carbon (DOC), nitrate/nitrite, and total hardness.
Aquifer solids sampling (Collect/Submit archived soil/rock cores) as needed	ISI P&T ISS MNA	Evaluation of soils within aquifer matrix: (i) attenuation mechanisms and rates and aquifer capacity for attenuation (ii) mineralogy characterization.	Collect samples from previously extracted soil cores from borehole PZ-51S.	Sequential extraction procedure (SEP) for analysis of cadmium (Cd) and cobalt (Co) to characterize Cd and Co in the aquifer solid matrix; total Cd, Co, aluminum, iron, manganese, silica concentrations; cation/anion exchange capacity.
Slug tests	ISI P&T ISS MNA	Refine conceptual model with new subsurface data.	Conduct slug tests in select wells not previously tested. Wells include PZ-50D, PZ-51S, PZ-51I, PZ-51D, and PB-10.	Transmissivity, storage coefficient, hydraulic conductivity.
Evaluation of the analytical results from specialized analysis of collected saturated unconsolidated aquifer matrix samples	ISI P&T ISS 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 2020.	Conceptually identify attenuation rates and aquifer capacity for Cd and Co. Evaluate long term stability of attenuation.

Notes:

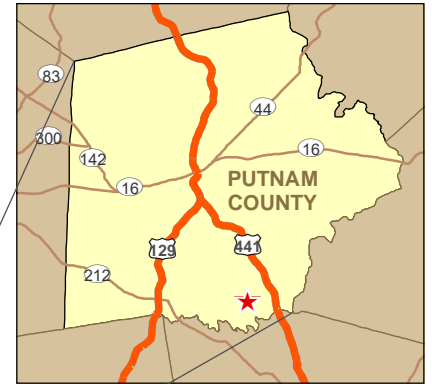
Applicable Corrective Measures (CM) Retained:

- ISI - Geochemical Approaches (In-Situ Injection)
- P&T - Hydraulic Containment (Pump and Treat)
- ISS – In-situ Solidification/Stabilization
- 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.



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 PLANT BRANCH



PROJECT
**SEMI-ANNUAL REMEDY SELECTION AND
 DESIGN PROGRESS REPORT**

TITLE
SITE LOCATION MAP

CONSULTANT



YYYY-MM-DD 2019-03-15

PREPARED DJC

DESIGN DLP

REVIEW RK

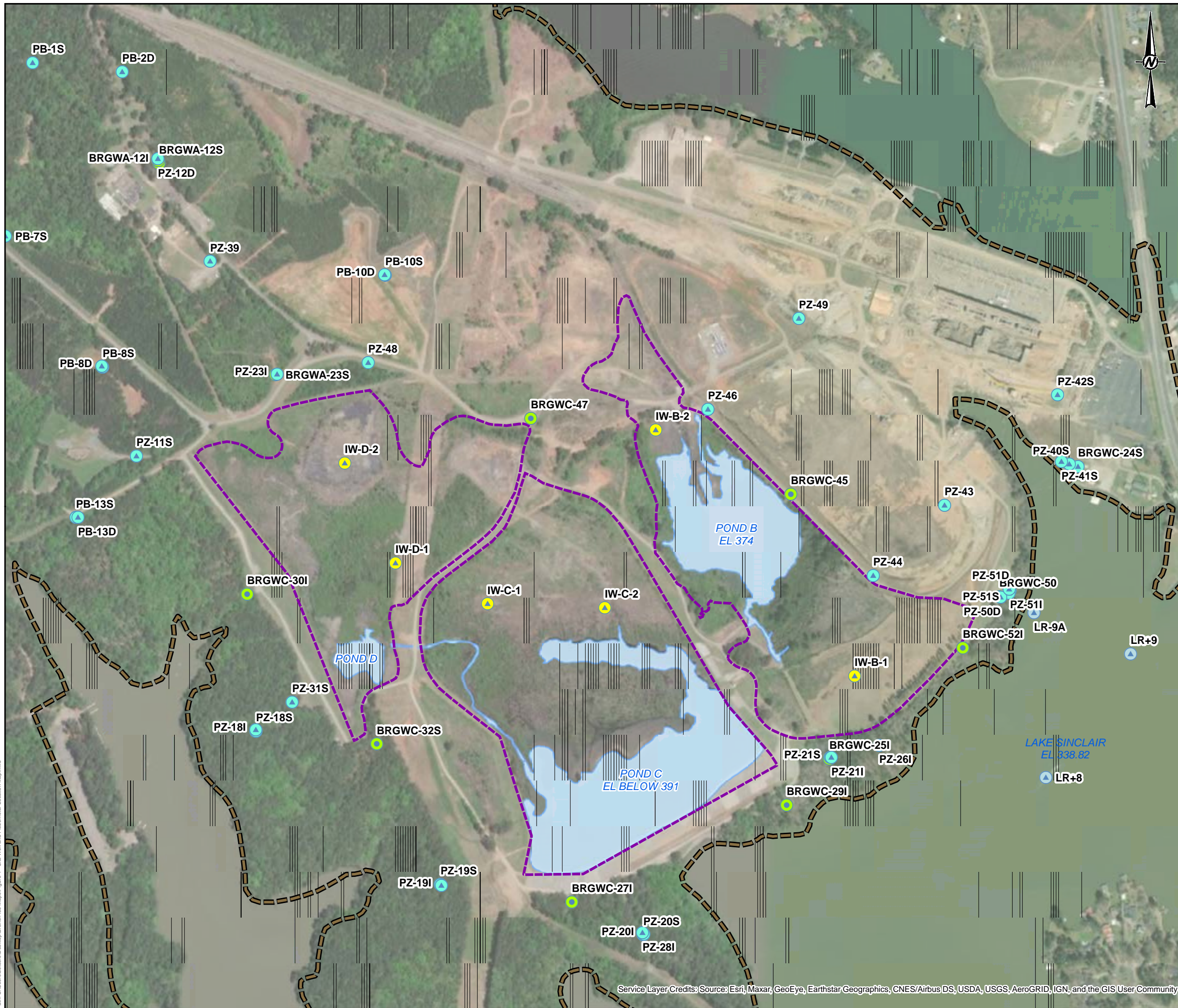
APPROVED DLP

PROJECT No.
 166625421

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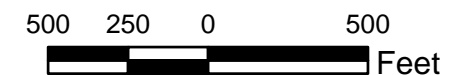
Rev.
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FIGURE
 1



- LEGEND**
- SURFACE WATER SAMPLE
 - MONITORING WELL
 - PIEZOMETER
 - INTERSTITIAL WELL
 - 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 (JULY AND NOVEMBER 2020).



CLIENT
GEORGIA POWER COMPANY
 PLANT BRANCH



PROJECT
SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

TITLE
MONITORING WELL, PIEZOMETER AND SURFACE WATER LOCATION MAP

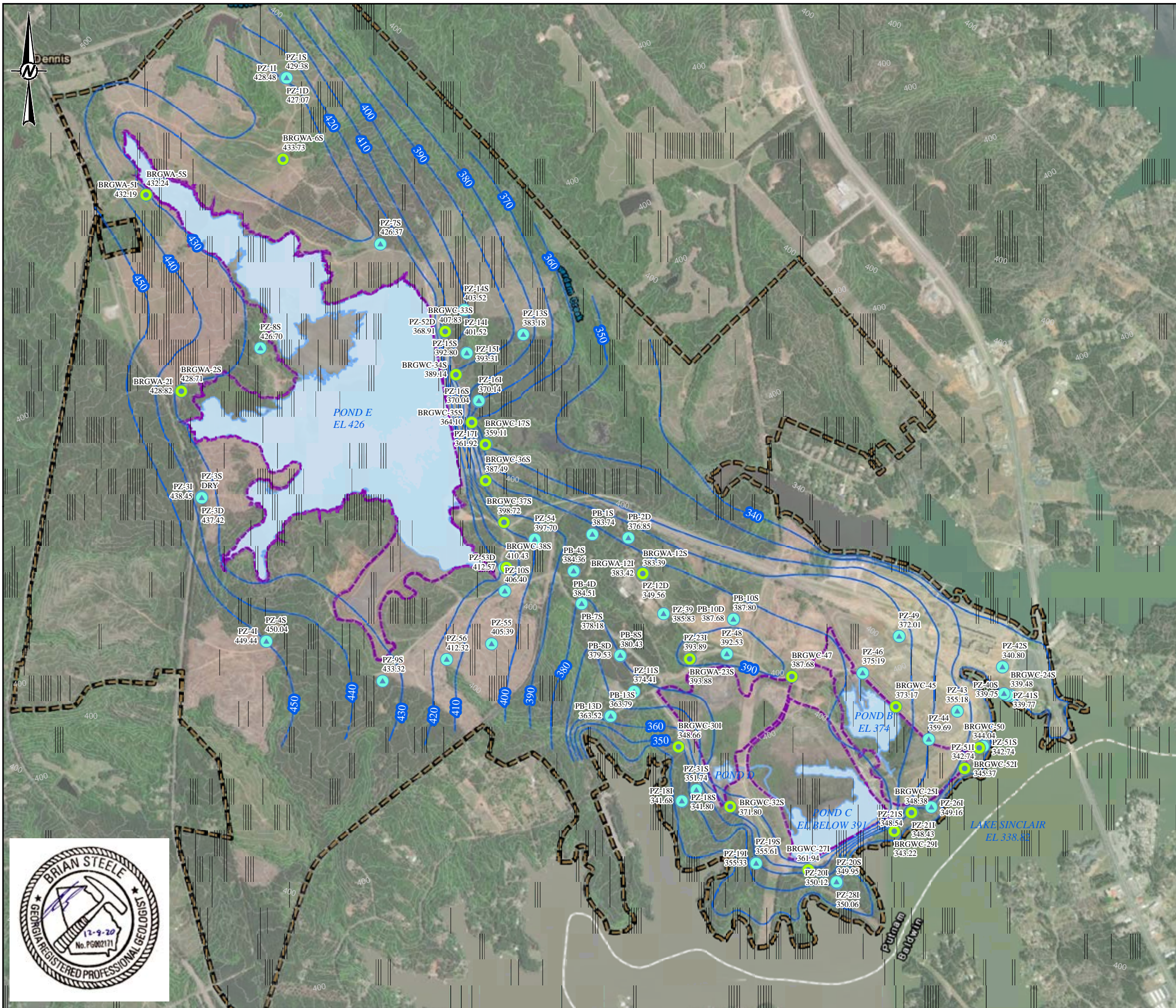
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	PREPARED	BAS
	DESIGN	BAS
	REVIEW	RK/DP
	APPROVED	

PROJECT No. 166625421 CONTROL 1666254Q002-GIS.mxd Rev. 1 FIGURE 2

Path: C:\Users\jchris\Desktop\Branch 1 - Site Well and Piezometer Location Map.mxd

1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



LEGEND

- 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. GROUNDWATER ELEVATIONS DISPLAYED IN NAVD88=NORTH AMERICAN VERTICAL DATUM 88
 5. GROUNDWATER ELEVATIONS RECORDED SEPTEMBER 14, 2020.

- REFERENCE**
1. SERVICE LAYER CREDITS: ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
SOURCE: ESRI, DIGITALGLOBE, 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. BORING/PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING & SURVEYING CO., INC. (JULY 2020).
 4. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



CLIENT
GEORGIA POWER COMPANY
 PLANT BRANCH

PROJECT
SEMI-ANNUAL REMEDY SELECTION AND DESIGN
PROGRESS REPORT

TITLE
POTENTIOMETRIC SURFACE CONTOUR
MAP SEPTEMBER 14, 2020

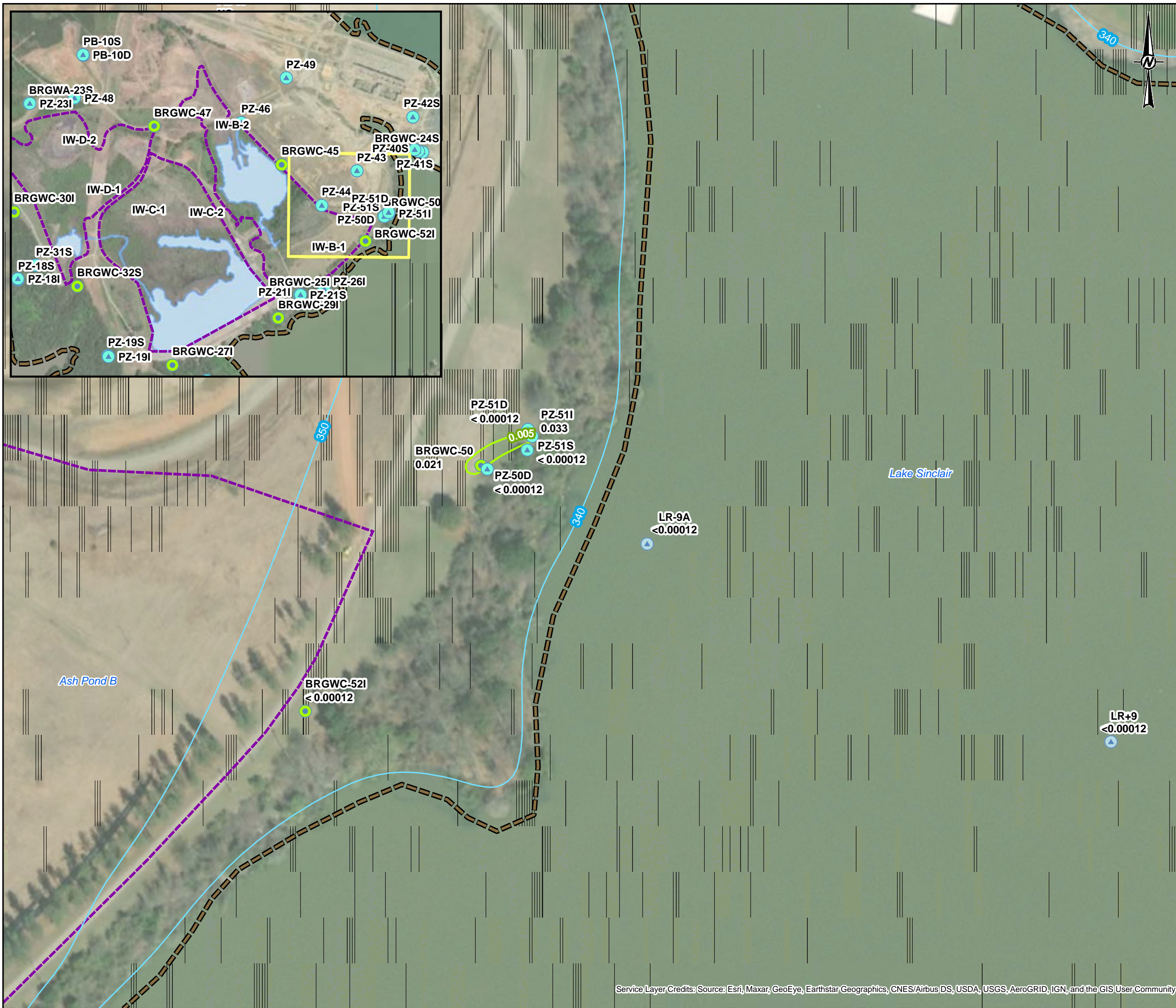
CONSULTANT	YYYY-MM-DD	2020-09-25
	PREPARED	SEB
	DESIGN	ED
	REVIEW	RK
	APPROVED	DLP

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



Path: C:\GIS\Southern Company\PlantBranch\Environmental - CCR\Figures\Potentiometric Surface Maps\Figure 1 - BCD September 2020 Pot Map.mxd

1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIS

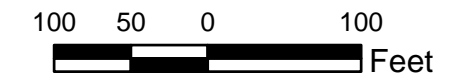


- LEGEND**
- SURFACE WATER SAMPLE
 - MONITORING WELL
 - PIEZOMETER
 - 0.005 CADMIUM GWPS ISOCONTOUR (INFERRED)
 - INFERRED POTENTIOMETRIC SURFACE (SEPT 2020)
 - PROPERTY BOUNDARY
 - APPROXIMATE ASH POND BOUNDARY
 - APPROXIMATE SURFACE WATER LIMITS

- 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 SEPTEMBER SEMI-ANNUAL MONITORING EVENT RESULTS AS WELL AS APPLICABLE DELINEATION DATA. SAMPLE RESULTS FROM PZ-50D AND PZ-51D FROM OCTOBER 2020.
 4. SURFACE WATER SAMPLE COLLECTED BY ARCADIS IN FEBRUARY 2021

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
 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

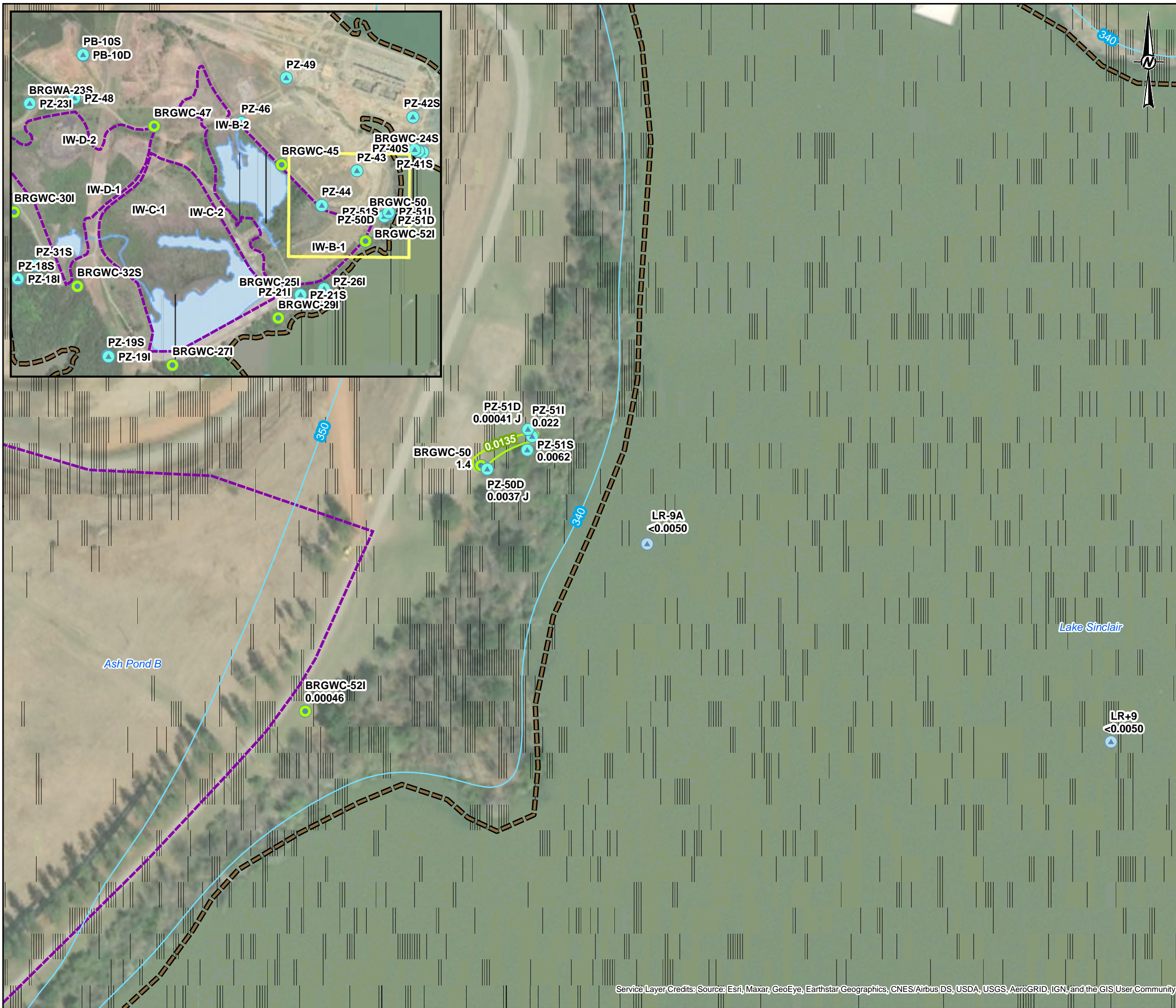


PROJECT
SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

TITLE
CADMIUM ISOCONCENTRATION CONTOUR MAP
POND BCD
SEPTEMBER 2020

CONSULTANT	YYYY-MM-DD	2020-06-03
PREPARED	BAS	
DESIGN	BAS	
REVIEW	RK/DP	
APPROVED		

PROJECT No. 166625421 CONTROL 1666254Q002-GIS.mxd Rev. 1 FIGURE 4



LEGEND

- ▲ SURFACE WATER SAMPLE
- MONITORING WELL
- ▲ PIEZOMETER
- 0.0135 CADMIUM GWPS ISOCONTOUR (INFERRED)
- PROPERTY BOUNDARY
- INFERRED POTENTIOMETRIC SURFACE (SEPT 2020)
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS

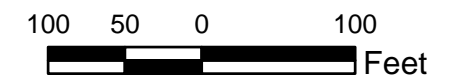
NOTES

1. GROUNDWATER CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L). GWPS = GROUNDWATER PROTECTION STANDARD. RSL = FEDERAL REGIONAL SCREENING LEVEL.
2. ISOCONTOURS SHOWN REPRESENT GROUNDWATER PROTECTION STANDARD
3. DATA SHOWN REPRESENT THE SEPTEMBER SEMI-ANNUAL MONITORING EVENT RESULTS AS WELL AS APPLICABLE DELINEATION DATA. SAMPLE RESULTS FROM PZ-50D AND PZ-51D FROM OCTOBER 2020.
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

Analyte	Units	GWPS
Cobalt	mg/L	0.0135

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

TITLE
COBALT ISOCONCENTRATION CONTOUR MAP
POND BCD
SEPTEMBER 2020

CONSULTANT	YYYY-MM-DD	2020-10-08
	PREPARED	BAS
	DESIGN	BAS
	REVIEW	RK/DP
	APPROVED	

Path: C:\Users\kshelton\Desktop\Branches\Map\Map\Figure 9 - September 2020 AP-BCD - Cobalt Isoconcentration 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

APPENDIX A

Laboratory Analytical Results

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-19131-1
Client Project/Site: SCS Site, Plant Branch

For:

Golder Associates Inc.
5170 Peachtree Road
Building 100, Suite 300
Atlanta, Georgia 30341

Attn: Brian Steele



*Authorized for release by:
6/25/2020 3:51:10 PM*

Ryan Henry, Project Manager I
(865)291-3000
william.henry@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

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	32
QC Sample Results	34
QC Association Summary	40
Lab Chronicle	49
Certification Summary	69
Method Summary	70
Chain of Custody	71

Definitions/Glossary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Qualifiers

Metals

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L	A negative instrument reading had an absolute value greater than the reporting limit

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: 140-19131-1

Job ID: 140-19131-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative 140-19131-1

Receipt

The samples were received on 5/20/2020 at 9:45am and arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

Metals

7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

- Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO₄), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO₃-H₂O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO₃, HCl and H₃BO₃. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO₃, HCl and H₃BO₃. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

$$\text{Result, } \mu\text{g/g or mg/Kg, dry weight} = (C \times V \times V1 \times D) / (W \times S \times V2)$$

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

Case Narrative

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Job ID: 140-19131-1 (Continued)

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

S = Percent solids/100

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Method 6010B: The following samples were diluted due to the presence of Iron which interferes with Cadmium and Selenium: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10) and PZ-53D 30 FT BGS (140-19131-11). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted due to the presence of Manganese which interferes with Selenium: BRGWA-2S(2) 39 FT BGS (140-19131-1) and PZ-52D 18 FT BGS (140-19131-7). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted due to the presence of titanium which interferes with Cobalt: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), PZ-52D 24-25 FT BGS (140-19131-8), BRGWC-50(2) 59 FT BGS (140-19131-9), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10), PZ-53D 30 FT BGS (140-19131-11) and PZ-53D 36 FT BGS (140-19131-12). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted to bring the concentration of target analyte, aluminum, within the calibration range: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), PZ-52D 24-25 FT BGS (140-19131-8), BRGWC-50(2) 59 FT BGS (140-19131-9), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10), PZ-53D 30 FT BGS (140-19131-11) and PZ-53D 36 FT BGS (140-19131-12). Elevated reporting limits (RLs) are provided.

Method 6010B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: BRGWA-6S(2) 42 FT BGS (140-19131-5) and BRGWC-50(2) 63-63.5 FT BGS (140-19131-10).

Method 6010B SEP: The following sample was diluted due to the presence of silicon which interferes with Selenium: BRGWA-2S(2) 39 FT BGS (140-19131-1). Elevated reporting limits (RLs) are provided.

Method 6010B SEP: The following samples were diluted due to the nature of the sample matrix: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), PZ-52D 24-25 FT BGS (140-19131-8), BRGWC-50(2) 59 FT BGS (140-19131-9), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10), PZ-53D 30 FT BGS (140-19131-11) and PZ-53D 36 FT BGS (140-19131-12). Elevated reporting limits (RLs) are provided for aluminum. The serial dilution analysis indicated a matrix issue with the results for aluminum increasing with dilution.

Case Narrative

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Job ID: 140-19131-1 (Continued)

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

% Moisture: The samples were analyzed for percent moisture using SOP number KNOX-WC-0012 (based on Modified MCAWW 160.3 and SM2540B and on the percent moisture determinations described in methods 3540C and 3550B).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

- 1
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- 12
- 13

Sample Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-19131-1	BRGWA-2S(2) 39 FT BGS	Solid	05/13/20 14:30	05/20/20 09:45	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Solid	05/13/20 14:40	05/20/20 09:45	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Solid	05/14/20 07:40	05/20/20 09:45	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Solid	05/14/20 07:50	05/20/20 09:45	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Solid	05/14/20 12:05	05/20/20 09:45	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Solid	05/14/20 12:15	05/20/20 09:45	
140-19131-7	PZ-52D 18 FT BGS	Solid	05/14/20 14:40	05/20/20 09:45	
140-19131-8	PZ-52D 24-25 FT BGS	Solid	05/14/20 14:50	05/20/20 09:45	
140-19131-9	BRGWC-50(2) 59 FT BGS	Solid	05/15/20 09:00	05/20/20 09:45	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Solid	05/15/20 09:20	05/20/20 09:45	
140-19131-11	PZ-53D 30 FT BGS	Solid	05/16/20 16:15	05/20/20 09:45	
140-19131-12	PZ-53D 36 FT BGS	Solid	05/16/20 16:25	05/20/20 09:45	

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 71.0

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		56	9.0	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Beryllium	ND		1.4	0.43	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Cadmium	ND		1.4	0.090	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Cobalt	ND		14	0.25	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Iron	ND		28	16	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Manganese	0.37	J	4.2	0.17	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Selenium	ND		2.8	0.96	mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8.9	J *	42	6.8	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3
Beryllium	ND	*	1.1	0.068	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3
Cadmium	ND		1.1	0.046	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3
Cobalt	ND		11	0.27	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3
Iron	ND	*	21	12	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3
Manganese	ND		3.2	1.2	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3
Selenium	ND		2.1	0.72	mg/Kg	☼	06/03/20 08:00	06/16/20 14:15	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	270		14	3.0	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Beryllium	0.16	J	0.35	0.021	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Cadmium	0.016	J B *	0.35	0.015	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Cobalt	14		3.5	0.063	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Iron	2000		7.0	4.1	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Manganese	320	B	1.1	0.038	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Selenium	0.45	J	0.70	0.24	mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1900		14	2.3	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Beryllium	0.77		0.35	0.023	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Cadmium	ND		0.35	0.015	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Cobalt	6.5		3.5	0.075	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Iron	17000		7.0	4.1	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Manganese	240		1.1	0.18	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Selenium	1.5	B *	0.70	0.66	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	210	**1	210	33	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Beryllium	ND	*	5.3	0.44	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Cadmium	ND		5.3	0.23	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Cobalt	ND	*	53	0.84	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Iron	ND	**1	110	62	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Manganese	3.0	J *	16	2.6	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Selenium	ND		11	3.7	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000		14	2.3	mg/Kg	☼	06/12/20 08:00	06/19/20 13:38	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 71.0

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.29	J	0.35	0.017	mg/Kg	☼	06/12/20 08:00	06/19/20 13:38	1
Cadmium	ND	L	0.35	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 13:38	1
Cobalt	8.3		7.0	0.13	mg/Kg	☼	06/12/20 08:00	06/19/20 16:54	2
Iron	24000		7.0	4.1	mg/Kg	☼	06/12/20 08:00	06/19/20 13:38	1
Manganese	71		1.1	0.35	mg/Kg	☼	06/12/20 08:00	06/19/20 13:38	1
Selenium	0.79		0.70	0.24	mg/Kg	☼	06/12/20 08:00	06/19/20 13:38	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	52000		140	23	mg/Kg	☼	06/15/20 08:00	06/22/20 15:00	10
Beryllium	ND		0.35	0.011	mg/Kg	☼	06/15/20 08:00	06/22/20 13:18	1
Cadmium	0.21	J	1.8	0.077	mg/Kg	☼	06/15/20 08:00	06/22/20 16:27	5
Cobalt	8.1	J	18	0.18	mg/Kg	☼	06/15/20 08:00	06/22/20 16:27	5
Iron	39000		35	29	mg/Kg	☼	06/15/20 08:00	06/22/20 16:27	5
Manganese	290		1.1	0.15	mg/Kg	☼	06/15/20 08:00	06/22/20 13:18	1
Selenium	ND		3.5	1.2	mg/Kg	☼	06/15/20 08:00	06/22/20 16:27	5

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	69000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	1.2		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.22	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	36		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	82000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	930		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.8		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	92000		140	23	mg/Kg	☼	05/29/20 08:00	06/23/20 14:27	10
Beryllium	0.66		0.35	0.011	mg/Kg	☼	05/29/20 08:00	06/23/20 12:43	1
Cadmium	1.4	J	3.5	0.15	mg/Kg	☼	05/29/20 08:00	06/23/20 14:27	10
Cobalt	72		70	0.73	mg/Kg	☼	05/29/20 08:00	06/23/20 17:24	20
Iron	97000		70	58	mg/Kg	☼	05/29/20 08:00	06/23/20 14:27	10
Manganese	1700		2.1	0.31	mg/Kg	☼	05/29/20 08:00	06/23/20 16:04	2
Selenium	3.2	J	7.0	2.4	mg/Kg	☼	05/29/20 08:00	06/23/20 14:27	10

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

Date Collected: 05/13/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 75.0

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		53	8.5	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4
Beryllium	ND		1.3	0.41	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4
Cadmium	ND		1.3	0.085	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4
Cobalt	ND		13	0.24	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4
Iron	ND		27	15	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4
Manganese	0.80	J	4.0	0.17	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4
Selenium	ND		2.7	0.91	mg/Kg	☼	06/02/20 08:00	06/16/20 12:26	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.6	J *	40	6.4	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3
Beryllium	ND	*	1.0	0.064	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3
Cadmium	ND		1.0	0.044	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3
Cobalt	ND		10	0.25	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3
Iron	ND	*	20	12	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3
Manganese	ND		3.0	1.1	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3
Selenium	ND		2.0	0.68	mg/Kg	☼	06/03/20 08:00	06/16/20 14:20	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	290		13	2.8	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1
Beryllium	0.15	J	0.33	0.020	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1
Cadmium	ND	*	0.33	0.015	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1
Cobalt	14		3.3	0.060	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1
Iron	1100		6.7	3.9	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1
Manganese	94	B	1.0	0.036	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1
Selenium	0.38	J	0.67	0.23	mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2400		13	2.1	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1
Beryllium	0.47		0.33	0.021	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1
Cadmium	ND		0.33	0.015	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1
Cobalt	13		3.3	0.071	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1
Iron	10000		6.7	3.9	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1
Manganese	89		1.0	0.17	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1
Selenium	1.1	B *	0.67	0.63	mg/Kg	☼	06/10/20 08:00	06/18/20 14:10	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	240	**1	200	31	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5
Beryllium	ND	*	5.0	0.42	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5
Cadmium	ND		5.0	0.21	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5
Cobalt	ND	*	50	0.80	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5
Iron	ND	**1	100	59	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5
Manganese	ND	*	15	2.5	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5
Selenium	4.2	J	10	3.5	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	15000		13	2.1	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

Date Collected: 05/13/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 75.0

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.16	J	0.33	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Cadmium	ND		0.33	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Cobalt	5.2		3.3	0.061	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Iron	15000		6.7	3.9	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Manganese	32		1.0	0.33	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Selenium	0.64	J	0.67	0.23	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	36000		130	21	mg/Kg	☼	06/15/20 08:00	06/22/20 15:05	10
Beryllium	ND		0.33	0.010	mg/Kg	☼	06/15/20 08:00	06/22/20 13:23	1
Cadmium	0.59	J	1.7	0.073	mg/Kg	☼	06/15/20 08:00	06/22/20 16:32	5
Cobalt	28	J	33	0.35	mg/Kg	☼	06/15/20 08:00	06/22/20 15:05	10
Iron	71000		33	27	mg/Kg	☼	06/15/20 08:00	06/22/20 16:32	5
Manganese	840		1.0	0.15	mg/Kg	☼	06/15/20 08:00	06/22/20 13:23	1
Selenium	3.0	J	3.3	1.1	mg/Kg	☼	06/15/20 08:00	06/22/20 16:32	5

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	55000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.78		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.59		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	60		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	97000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1100		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	9.4		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	80000		130	21	mg/Kg	☼	05/29/20 08:00	06/23/20 14:32	10
Beryllium	0.46		0.33	0.010	mg/Kg	☼	05/29/20 08:00	06/23/20 12:49	1
Cadmium	1.6	J	3.3	0.15	mg/Kg	☼	05/29/20 08:00	06/23/20 14:32	10
Cobalt	54	J	67	0.69	mg/Kg	☼	05/29/20 08:00	06/23/20 17:29	20
Iron	98000		67	55	mg/Kg	☼	05/29/20 08:00	06/23/20 14:32	10
Manganese	840		1.0	0.15	mg/Kg	☼	05/29/20 08:00	06/23/20 12:49	1
Selenium	3.9	J	6.7	2.3	mg/Kg	☼	05/29/20 08:00	06/23/20 14:32	10

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3

Date Collected: 05/14/20 07:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 84.1

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		48	7.6	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4
Beryllium	ND		1.2	0.37	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4
Cadmium	ND		1.2	0.076	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4
Cobalt	ND		12	0.21	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4
Iron	ND		24	14	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4
Manganese	0.44	J	3.6	0.15	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4
Selenium	ND		2.4	0.81	mg/Kg	☼	06/02/20 08:00	06/16/20 12:31	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6.2	J *	36	5.7	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3
Beryllium	ND	*	0.89	0.057	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3
Cadmium	ND		0.89	0.039	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3
Cobalt	ND		8.9	0.22	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3
Iron	ND	*	18	10	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3
Manganese	ND		2.7	1.0	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3
Selenium	0.72	J	1.8	0.61	mg/Kg	☼	06/03/20 08:00	06/16/20 14:25	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	130		12	2.5	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1
Beryllium	0.073	J	0.30	0.018	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1
Cadmium	0.023	J B *	0.30	0.013	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1
Cobalt	6.0		3.0	0.053	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1
Iron	410		5.9	3.4	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1
Manganese	78	B	0.89	0.032	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1
Selenium	ND		0.59	0.20	mg/Kg	☼	06/08/20 08:00	06/18/20 12:20	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1900		12	1.9	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1
Beryllium	0.21	J	0.30	0.019	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1
Cadmium	ND		0.30	0.013	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1
Cobalt	2.9	J	3.0	0.063	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1
Iron	4500		5.9	3.4	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1
Manganese	40		0.89	0.15	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1
Selenium	1.0	B *	0.59	0.56	mg/Kg	☼	06/10/20 08:00	06/18/20 14:15	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	77	J * *1	180	28	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5
Beryllium	ND	*	4.5	0.37	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5
Cadmium	ND		4.5	0.19	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5
Cobalt	ND	*	45	0.71	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5
Iron	ND	* *1	89	52	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5
Manganese	ND	*	13	2.2	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5
Selenium	ND		8.9	3.1	mg/Kg	☼	06/12/20 08:00	06/19/20 11:53	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11000		12	1.9	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3

Date Collected: 05/14/20 07:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 84.1

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.075	J	0.30	0.014	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1
Cadmium	ND		0.30	0.013	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1
Cobalt	5.4		3.0	0.055	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1
Iron	11000		5.9	3.4	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1
Manganese	42		0.89	0.30	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1
Selenium	0.41	J	0.59	0.20	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	34000		120	19	mg/Kg	☼	06/15/20 08:00	06/22/20 15:10	10
Beryllium	0.33		0.30	0.0089	mg/Kg	☼	06/15/20 08:00	06/22/20 13:29	1
Cadmium	ND		1.5	0.065	mg/Kg	☼	06/15/20 08:00	06/22/20 16:37	5
Cobalt	15		15	0.15	mg/Kg	☼	06/15/20 08:00	06/22/20 16:37	5
Iron	45000		30	24	mg/Kg	☼	06/15/20 08:00	06/22/20 16:37	5
Manganese	580		0.89	0.13	mg/Kg	☼	06/15/20 08:00	06/22/20 13:29	1
Selenium	1.2	J	3.0	1.0	mg/Kg	☼	06/15/20 08:00	06/22/20 16:37	5

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	47000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.69		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.023	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	30		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	60000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	740		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	3.4		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	86000		120	19	mg/Kg	☼	05/29/20 08:00	06/23/20 14:37	10
Beryllium	0.60		0.30	0.0089	mg/Kg	☼	05/29/20 08:00	06/23/20 12:54	1
Cadmium	2.2		0.59	0.026	mg/Kg	☼	05/29/20 08:00	06/23/20 16:15	2
Cobalt	43		30	0.31	mg/Kg	☼	05/29/20 08:00	06/23/20 14:37	10
Iron	56000		12	9.7	mg/Kg	☼	05/29/20 08:00	06/23/20 16:15	2
Manganese	750		0.89	0.13	mg/Kg	☼	05/29/20 08:00	06/23/20 12:54	1
Selenium	ND		1.2	0.40	mg/Kg	☼	05/29/20 08:00	06/23/20 16:15	2

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Lab Sample ID: 140-19131-4

Date Collected: 05/14/20 07:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.3

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		49	7.8	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Beryllium	ND		1.2	0.37	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Cadmium	ND		1.2	0.078	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Cobalt	ND		12	0.22	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Iron	ND		24	14	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Manganese	0.43	J	3.6	0.15	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Selenium	ND		2.4	0.83	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.5	J *	36	5.8	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Beryllium	ND	*	0.91	0.058	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Cadmium	ND		0.91	0.040	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Cobalt	ND		9.1	0.23	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Iron	ND	*	18	11	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Manganese	ND		2.7	1.0	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Selenium	0.73	J	1.8	0.62	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	140		12	2.6	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1
Beryllium	0.089	J	0.30	0.018	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1
Cadmium	0.021	J B *	0.30	0.013	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1
Cobalt	4.9		3.0	0.055	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1
Iron	590		6.1	3.5	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1
Manganese	120	B	0.91	0.033	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1
Selenium	ND		0.61	0.21	mg/Kg	☼	06/08/20 08:00	06/18/20 12:26	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1800		12	1.9	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1
Beryllium	0.25	J	0.30	0.019	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1
Cadmium	0.018	J	0.30	0.013	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1
Cobalt	2.7	J	3.0	0.064	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1
Iron	4700		6.1	3.5	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1
Manganese	65		0.91	0.16	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1
Selenium	0.90	B *	0.61	0.57	mg/Kg	☼	06/10/20 08:00	06/18/20 14:20	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	160	J * *1	180	29	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5
Beryllium	ND	*	4.6	0.38	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5
Cadmium	ND		4.6	0.19	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5
Cobalt	ND	*	46	0.73	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5
Iron	ND	* *1	91	53	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5
Manganese	ND	*	14	2.2	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5
Selenium	ND		9.1	3.2	mg/Kg	☼	06/12/20 08:00	06/19/20 11:58	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9000		12	1.9	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Lab Sample ID: 140-19131-4

Date Collected: 05/14/20 07:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.3

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.082	J	0.30	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Cadmium	ND		0.30	0.013	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Cobalt	4.0		3.0	0.056	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Iron	9100		6.1	3.5	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Manganese	32		0.91	0.30	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Selenium	ND		0.61	0.21	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	37000		120	19	mg/Kg	☼	06/15/20 08:00	06/22/20 15:15	10
Beryllium	0.35		0.30	0.0091	mg/Kg	☼	06/15/20 08:00	06/22/20 13:50	1
Cadmium	0.17	J	1.5	0.067	mg/Kg	☼	06/15/20 08:00	06/22/20 16:42	5
Cobalt	18		15	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 16:42	5
Iron	53000		30	25	mg/Kg	☼	06/15/20 08:00	06/22/20 16:42	5
Manganese	690		0.91	0.13	mg/Kg	☼	06/15/20 08:00	06/22/20 13:50	1
Selenium	1.1	J	3.0	1.0	mg/Kg	☼	06/15/20 08:00	06/22/20 16:42	5

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	48000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.77		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.21	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	29		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	68000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	900		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.7		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	87000		120	19	mg/Kg	☼	05/29/20 08:00	06/23/20 14:41	10
Beryllium	0.67		0.30	0.0091	mg/Kg	☼	05/29/20 08:00	06/23/20 13:16	1
Cadmium	2.2		0.61	0.027	mg/Kg	☼	05/29/20 08:00	06/23/20 16:21	2
Cobalt	36		30	0.32	mg/Kg	☼	05/29/20 08:00	06/23/20 14:41	10
Iron	58000		12	10	mg/Kg	☼	05/29/20 08:00	06/23/20 16:21	2
Manganese	770		0.91	0.13	mg/Kg	☼	05/29/20 08:00	06/23/20 13:16	1
Selenium	ND		1.2	0.41	mg/Kg	☼	05/29/20 08:00	06/23/20 16:21	2

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.7

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		57	9.2	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4
Beryllium	ND		1.4	0.44	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4
Cadmium	ND		1.4	0.092	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4
Cobalt	ND		14	0.26	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4
Iron	ND		29	17	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4
Manganese	0.25	J	4.3	0.18	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4
Selenium	ND		2.9	0.98	mg/Kg	☼	06/02/20 08:00	06/16/20 12:57	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.7	J *	43	6.9	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3
Beryllium	ND	*	1.1	0.069	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3
Cadmium	ND		1.1	0.047	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3
Cobalt	ND		11	0.27	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3
Iron	ND	*	22	12	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3
Manganese	ND		3.2	1.2	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3
Selenium	ND		2.2	0.73	mg/Kg	☼	06/03/20 08:00	06/16/20 14:52	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	220		14	3.0	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1
Beryllium	0.049	J	0.36	0.022	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1
Cadmium	0.11	J B *	0.36	0.016	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1
Cobalt	19		3.6	0.065	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1
Iron	490		7.2	4.2	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1
Manganese	430	B	1.1	0.039	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1
Selenium	0.27	J	0.72	0.24	mg/Kg	☼	06/08/20 08:00	06/18/20 12:46	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3100		14	2.3	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1
Beryllium	0.45		0.36	0.023	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1
Cadmium	ND		0.36	0.016	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1
Cobalt	9.9		3.6	0.076	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1
Iron	10000		7.2	4.2	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1
Manganese	270		1.1	0.19	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1
Selenium	1.4	B *	0.72	0.67	mg/Kg	☼	06/10/20 08:00	06/18/20 14:40	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	140	J * *1	220	34	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5
Beryllium	ND	*	5.4	0.45	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5
Cadmium	ND		5.4	0.23	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5
Cobalt	ND	*	54	0.86	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5
Iron	ND	* *1	110	63	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5
Manganese	3.5	J *	16	2.7	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5
Selenium	4.3	J	11	3.7	mg/Kg	☼	06/12/20 08:00	06/19/20 12:19	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	16000		14	2.3	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.7

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.15	J	0.36	0.017	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1
Cadmium	ND	L	0.36	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1
Cobalt	5.2		3.6	0.066	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1
Iron	20000		7.2	4.2	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1
Manganese	54		1.1	0.36	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1
Selenium	0.69	J	0.72	0.24	mg/Kg	☼	06/12/20 08:00	06/19/20 16:12	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	37000		140	23	mg/Kg	☼	06/15/20 08:00	06/22/20 15:20	10
Beryllium	0.19	J	0.36	0.011	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Cadmium	0.49		0.36	0.016	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Cobalt	8.7	J	18	0.19	mg/Kg	☼	06/15/20 08:00	06/22/20 16:47	5
Iron	34000		7.2	5.9	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Manganese	260		1.1	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Selenium	0.90		0.72	0.24	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	57000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.84		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.60		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	43		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	65000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1000		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	7.5		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	110000		140	23	mg/Kg	☼	05/29/20 08:00	06/23/20 14:46	10
Beryllium	0.66	J	0.72	0.022	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2
Cadmium	1.7		0.72	0.032	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2
Cobalt	58		36	0.37	mg/Kg	☼	05/29/20 08:00	06/23/20 14:46	10
Iron	61000		14	12	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2
Manganese	1100		2.2	0.32	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2
Selenium	0.94	J	1.4	0.49	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.9

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		57	9.1	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4
Beryllium	ND		1.4	0.44	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4
Cadmium	ND		1.4	0.091	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4
Cobalt	ND		14	0.26	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4
Iron	ND		29	17	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4
Manganese	0.67	J	4.3	0.18	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4
Selenium	ND		2.9	0.97	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8.2	J *	43	6.9	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3
Beryllium	ND	*	1.1	0.069	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3
Cadmium	ND		1.1	0.047	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3
Cobalt	ND		11	0.27	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3
Iron	ND	*	21	12	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3
Manganese	ND		3.2	1.2	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3
Selenium	ND		2.1	0.73	mg/Kg	☼	06/03/20 08:00	06/16/20 14:57	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	230		14	3.0	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1
Beryllium	0.066	J	0.36	0.021	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1
Cadmium	0.094	J B *	0.36	0.016	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1
Cobalt	21		3.6	0.064	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1
Iron	480		7.1	4.1	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1
Manganese	460	B	1.1	0.039	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1
Selenium	0.29	J	0.71	0.24	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2600		14	2.3	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1
Beryllium	0.20	J	0.36	0.023	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1
Cadmium	0.022	J	0.36	0.016	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1
Cobalt	9.9		3.6	0.076	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1
Iron	5500		7.1	4.1	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1
Manganese	210		1.1	0.19	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1
Selenium	1.6	B *	0.71	0.67	mg/Kg	☼	06/10/20 08:00	06/18/20 14:45	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	96	J * *1	210	34	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5
Beryllium	ND	*	5.4	0.45	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5
Cadmium	ND		5.4	0.23	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5
Cobalt	ND	*	54	0.86	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5
Iron	ND	* *1	110	63	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5
Manganese	3.8	J *	16	2.6	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5
Selenium	ND		11	3.7	mg/Kg	☼	06/12/20 08:00	06/19/20 12:25	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000		14	2.3	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.9

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.11	J	0.36	0.017	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1
Cadmium	ND		0.36	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1
Cobalt	5.6		3.6	0.066	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1
Iron	20000		7.1	4.1	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1
Manganese	40		1.1	0.36	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1
Selenium	0.59	J	0.71	0.24	mg/Kg	☼	06/12/20 08:00	06/19/20 16:17	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	29000		140	23	mg/Kg	☼	06/15/20 08:00	06/22/20 15:25	10
Beryllium	ND		0.36	0.011	mg/Kg	☼	06/15/20 08:00	06/22/20 14:01	1
Cadmium	0.28	J	1.8	0.079	mg/Kg	☼	06/15/20 08:00	06/22/20 16:52	5
Cobalt	16	J	18	0.19	mg/Kg	☼	06/15/20 08:00	06/22/20 16:52	5
Iron	54000		36	29	mg/Kg	☼	06/15/20 08:00	06/22/20 16:52	5
Manganese	500		1.1	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 14:01	1
Selenium	ND		3.6	1.2	mg/Kg	☼	06/15/20 08:00	06/22/20 16:52	5

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	46000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.38		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.39		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	53		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	80000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1200		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.4		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	98000		140	23	mg/Kg	☼	05/29/20 08:00	06/23/20 14:51	10
Beryllium	0.31	J	0.36	0.011	mg/Kg	☼	05/29/20 08:00	06/23/20 13:27	1
Cadmium	0.66	J	3.6	0.16	mg/Kg	☼	05/29/20 08:00	06/23/20 14:51	10
Cobalt	64		36	0.37	mg/Kg	☼	05/29/20 08:00	06/23/20 14:51	10
Iron	91000		71	59	mg/Kg	☼	05/29/20 08:00	06/23/20 14:51	10
Manganese	1000		1.1	0.16	mg/Kg	☼	05/29/20 08:00	06/23/20 13:27	1
Selenium	2.5	J	7.1	2.4	mg/Kg	☼	05/29/20 08:00	06/23/20 14:51	10

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7

Date Collected: 05/14/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 67.3

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		59	9.5	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4
Beryllium	ND		1.5	0.46	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4
Cadmium	ND		1.5	0.095	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4
Cobalt	0.47	J	15	0.27	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4
Iron	ND		30	17	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4
Manganese	11		4.5	0.18	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4
Selenium	ND		3.0	1.0	mg/Kg	☼	06/02/20 08:00	06/16/20 13:07	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14	J *	45	7.1	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3
Beryllium	ND	*	1.1	0.071	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3
Cadmium	ND		1.1	0.049	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3
Cobalt	ND		11	0.28	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3
Iron	ND	*	22	13	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3
Manganese	2.7	J	3.3	1.2	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3
Selenium	ND		2.2	0.76	mg/Kg	☼	06/03/20 08:00	06/16/20 15:02	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	370		15	3.1	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1
Beryllium	0.35	J	0.37	0.022	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1
Cadmium	0.029	J B *	0.37	0.016	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1
Cobalt	17		3.7	0.067	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1
Iron	1100		7.4	4.3	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1
Manganese	680	B	1.1	0.040	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1
Selenium	0.39	J	0.74	0.25	mg/Kg	☼	06/08/20 08:00	06/18/20 12:57	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2300		15	2.4	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1
Beryllium	1.6		0.37	0.024	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1
Cadmium	ND		0.37	0.016	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1
Cobalt	4.7		3.7	0.079	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1
Iron	17000		7.4	4.3	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1
Manganese	400		1.1	0.19	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1
Selenium	1.9	B *	0.74	0.70	mg/Kg	☼	06/10/20 08:00	06/18/20 14:50	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	640	**1	220	35	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5
Beryllium	ND	*	5.6	0.47	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5
Cadmium	ND		5.6	0.24	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5
Cobalt	ND	*	56	0.89	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5
Iron	ND	**1	110	65	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5
Manganese	9.8	J *	17	2.7	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5
Selenium	4.4	J	11	3.9	mg/Kg	☼	06/12/20 08:00	06/19/20 12:30	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13000		15	2.4	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7

Date Collected: 05/14/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 67.3

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	1.0		0.37	0.018	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Cadmium	ND	L	0.37	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Cobalt	4.4	J	7.4	0.14	mg/Kg	☼	06/12/20 08:00	06/19/20 17:10	2
Iron	27000		7.4	4.3	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Manganese	190		1.1	0.37	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Selenium	0.66	J	0.74	0.25	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	37000		150	24	mg/Kg	☼	06/15/20 08:00	06/22/20 15:30	10
Beryllium	0.96		0.37	0.011	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1
Cadmium	0.91		0.37	0.016	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1
Cobalt	7.5	J	37	0.39	mg/Kg	☼	06/15/20 08:00	06/22/20 15:30	10
Iron	36000		7.4	6.1	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1
Manganese	280		1.1	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1
Selenium	1.0		0.74	0.25	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	53000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	4.0		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.94		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	34		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	80000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1600		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	8.3		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	120000		150	24	mg/Kg	☼	05/29/20 08:00	06/23/20 14:56	10
Beryllium	3.6		0.37	0.011	mg/Kg	☼	05/29/20 08:00	06/23/20 13:33	1
Cadmium	1.9		0.74	0.033	mg/Kg	☼	05/29/20 08:00	06/23/20 16:37	2
Cobalt	46		37	0.39	mg/Kg	☼	05/29/20 08:00	06/23/20 14:56	10
Iron	71000		15	12	mg/Kg	☼	05/29/20 08:00	06/23/20 16:37	2
Manganese	1700		2.2	0.33	mg/Kg	☼	05/29/20 08:00	06/23/20 16:37	2
Selenium	1.4	J	1.5	0.51	mg/Kg	☼	05/29/20 08:00	06/23/20 16:37	2

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-52D 24-25 FT BGS

Lab Sample ID: 140-19131-8

Date Collected: 05/14/20 14:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 76.8

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		52	8.3	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Beryllium	ND		1.3	0.40	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Cadmium	ND		1.3	0.083	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Cobalt	ND		13	0.23	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Iron	ND		26	15	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Manganese	7.1		3.9	0.16	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Selenium	ND		2.6	0.89	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17	J *	39	6.3	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Beryllium	ND	*	0.98	0.063	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Cadmium	ND		0.98	0.043	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Cobalt	ND		9.8	0.25	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Iron	ND	*	20	11	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Manganese	1.7	J	2.9	1.1	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Selenium	ND		2.0	0.66	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	260		13	2.7	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1
Beryllium	0.21	J	0.33	0.020	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1
Cadmium	0.025	J B *	0.33	0.014	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1
Cobalt	3.3		3.3	0.059	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1
Iron	460		6.5	3.8	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1
Manganese	170	B	0.98	0.035	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1
Selenium	0.30	J	0.65	0.22	mg/Kg	☼	06/08/20 08:00	06/18/20 13:02	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2200		13	2.1	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1
Beryllium	1.1		0.33	0.021	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1
Cadmium	ND		0.33	0.014	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1
Cobalt	2.6	J	3.3	0.069	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1
Iron	7100		6.5	3.8	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1
Manganese	120		0.98	0.17	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1
Selenium	1.3	B *	0.65	0.61	mg/Kg	☼	06/10/20 08:00	06/18/20 14:55	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	530	**1	200	31	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Beryllium	ND	*	4.9	0.41	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Cadmium	ND		4.9	0.21	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Cobalt	ND	*	49	0.78	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Iron	ND	**1	98	57	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Manganese	ND	*	15	2.4	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Selenium	ND		9.8	3.4	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000		13	2.1	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1

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Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-52D 24-25 FT BGS

Lab Sample ID: 140-19131-8

Date Collected: 05/14/20 14:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 76.8

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.53		0.33	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1
Cadmium	ND		0.33	0.014	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1
Cobalt	3.0	J	3.3	0.060	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1
Iron	9400		6.5	3.8	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1
Manganese	95		0.98	0.33	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1
Selenium	ND		0.65	0.22	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	47000		130	21	mg/Kg	☼	06/15/20 08:00	06/22/20 15:50	10
Beryllium	1.4		0.33	0.0098	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	1
Cadmium	0.14	J	0.33	0.014	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	1
Cobalt	3.5		3.3	0.034	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	1
Iron	14000		6.5	5.3	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	1
Manganese	310		0.98	0.14	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	1
Selenium	ND		0.65	0.22	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	64000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	3.2		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.17	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	12		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	31000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	710		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	1.6		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	86000		130	21	mg/Kg	☼	05/29/20 08:00	06/23/20 15:17	10
Beryllium	2.7		0.33	0.0098	mg/Kg	☼	05/29/20 08:00	06/23/20 13:38	1
Cadmium	0.55		0.33	0.014	mg/Kg	☼	05/29/20 08:00	06/23/20 13:38	1
Cobalt	12		6.5	0.068	mg/Kg	☼	05/29/20 08:00	06/23/20 16:58	2
Iron	24000		6.5	5.3	mg/Kg	☼	05/29/20 08:00	06/23/20 13:38	1
Manganese	580		0.98	0.14	mg/Kg	☼	05/29/20 08:00	06/23/20 13:38	1
Selenium	ND		0.65	0.22	mg/Kg	☼	05/29/20 08:00	06/23/20 13:38	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 59 FT BGS

Lab Sample ID: 140-19131-9

Date Collected: 05/15/20 09:00

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 87.3

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		46	7.3	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4
Beryllium	ND		1.1	0.35	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4
Cadmium	0.11	J	1.1	0.073	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4
Cobalt	1.6	J	11	0.21	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4
Iron	ND		23	13	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4
Manganese	160		3.4	0.14	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4
Selenium	ND		2.3	0.78	mg/Kg	☼	06/02/20 08:00	06/16/20 13:18	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	29	J *	34	5.5	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3
Beryllium	ND	*	0.86	0.055	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3
Cadmium	0.084	J	0.86	0.038	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3
Cobalt	1.1	J	8.6	0.22	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3
Iron	27	*	17	10	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3
Manganese	36		2.6	0.96	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3
Selenium	ND		1.7	0.58	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	260		11	2.4	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1
Beryllium	0.20	J	0.29	0.017	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1
Cadmium	0.10	J B *	0.29	0.013	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1
Cobalt	2.6	J	2.9	0.052	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1
Iron	1500		5.7	3.3	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1
Manganese	67	B	0.86	0.031	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1
Selenium	0.23	J	0.57	0.19	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1300		11	1.8	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1
Beryllium	0.32		0.29	0.018	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1
Cadmium	0.36		0.29	0.013	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1
Cobalt	1.5	J	2.9	0.061	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1
Iron	5300		5.7	3.3	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1
Manganese	52		0.86	0.15	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1
Selenium	1.1	B *	0.57	0.54	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	200	**1	170	27	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5
Beryllium	ND	*	4.3	0.36	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5
Cadmium	ND		4.3	0.18	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5
Cobalt	ND	*	43	0.69	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5
Iron	ND	**1	86	50	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5
Manganese	ND	*	13	2.1	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5
Selenium	ND		8.6	3.0	mg/Kg	☼	06/12/20 08:00	06/19/20 12:41	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12000		11	1.8	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1

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Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 59 FT BGS

Lab Sample ID: 140-19131-9

Date Collected: 05/15/20 09:00

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 87.3

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.23	J	0.29	0.014	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Cadmium	ND		0.29	0.013	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Cobalt	4.5	J	14	0.26	mg/Kg	☼	06/12/20 08:00	06/19/20 17:15	5
Iron	16000		5.7	3.3	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Manganese	370		0.86	0.29	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Selenium	0.52	J	0.57	0.19	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	48000		110	18	mg/Kg	☼	06/15/20 08:00	06/22/20 15:55	10
Beryllium	1.6		0.29	0.0086	mg/Kg	☼	06/15/20 08:00	06/22/20 14:18	1
Cadmium	0.047	J	0.29	0.013	mg/Kg	☼	06/15/20 08:00	06/22/20 14:18	1
Cobalt	0.31	J	2.9	0.030	mg/Kg	☼	06/15/20 08:00	06/22/20 14:18	1
Iron	2700		5.7	4.7	mg/Kg	☼	06/15/20 08:00	06/22/20 14:18	1
Manganese	63		0.86	0.13	mg/Kg	☼	06/15/20 08:00	06/22/20 14:18	1
Selenium	ND		0.57	0.19	mg/Kg	☼	06/15/20 08:00	06/22/20 14:18	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	62000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	2.3		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.70		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	12		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	25000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	750		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	1.8		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	78000		110	18	mg/Kg	☼	05/29/20 08:00	06/23/20 15:22	10
Beryllium	1.9		0.29	0.0086	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Cadmium	0.72		0.29	0.013	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Cobalt	11	J	14	0.15	mg/Kg	☼	05/29/20 08:00	06/23/20 17:03	5
Iron	18000		5.7	4.7	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Manganese	540		0.86	0.13	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Selenium	ND		0.57	0.19	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Lab Sample ID: 140-19131-10

Date Collected: 05/15/20 09:20

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 99.8

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		40	6.4	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4
Beryllium	ND		1.0	0.31	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4
Cadmium	ND		1.0	0.064	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4
Cobalt	ND		10	0.18	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4
Iron	ND		20	12	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4
Manganese	0.70	J	3.0	0.12	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4
Selenium	ND		2.0	0.68	mg/Kg	☼	06/02/20 08:00	06/16/20 13:23	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14	J *	30	4.8	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3
Beryllium	ND	*	0.75	0.048	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3
Cadmium	ND		0.75	0.033	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3
Cobalt	ND		7.5	0.19	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3
Iron	58	*	15	8.7	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3
Manganese	5.0		2.3	0.84	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3
Selenium	ND		1.5	0.51	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	110		10	2.1	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1
Beryllium	ND		0.25	0.015	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1
Cadmium	0.028	J B *	0.25	0.011	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1
Cobalt	ND		2.5	0.045	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1
Iron	300		5.0	2.9	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1
Manganese	8.1	B	0.75	0.027	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1
Selenium	0.18	J	0.50	0.17	mg/Kg	☼	06/08/20 08:00	06/18/20 13:12	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	900		10	1.6	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1
Beryllium	ND		0.25	0.016	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1
Cadmium	ND		0.25	0.011	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1
Cobalt	0.30	J	2.5	0.053	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1
Iron	2100		5.0	2.9	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1
Manganese	60		0.75	0.13	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1
Selenium	0.70	B *	0.50	0.47	mg/Kg	☼	06/10/20 08:00	06/18/20 15:05	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	64	J * *1	150	24	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5
Beryllium	ND	*	3.8	0.32	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5
Cadmium	ND		3.8	0.16	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5
Cobalt	ND	*	38	0.60	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5
Iron	ND	* *1	75	44	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5
Manganese	3.0	J *	11	1.9	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5
Selenium	ND		7.5	2.6	mg/Kg	☼	06/12/20 08:00	06/19/20 12:46	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20000		10	1.6	mg/Kg	☼	06/12/20 08:00	06/19/20 16:38	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Lab Sample ID: 140-19131-10

Date Collected: 05/15/20 09:20

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 99.8

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.25	0.012	mg/Kg	☼	06/12/20 08:00	06/19/20 16:38	1
Cadmium	ND		1.3	0.055	mg/Kg	☼	06/12/20 08:00	06/19/20 17:21	5
Cobalt	8.9	J	13	0.23	mg/Kg	☼	06/12/20 08:00	06/19/20 17:21	5
Iron	39000		25	15	mg/Kg	☼	06/12/20 08:00	06/19/20 17:21	5
Manganese	930		0.75	0.25	mg/Kg	☼	06/12/20 08:00	06/19/20 16:38	1
Selenium	1.3	J	2.5	0.85	mg/Kg	☼	06/12/20 08:00	06/19/20 17:21	5

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	32000		100	16	mg/Kg	☼	06/15/20 08:00	06/22/20 16:00	10
Beryllium	0.94		0.25	0.0075	mg/Kg	☼	06/15/20 08:00	06/22/20 14:23	1
Cadmium	0.12	J	0.25	0.011	mg/Kg	☼	06/15/20 08:00	06/22/20 14:23	1
Cobalt	1.2	J	13	0.13	mg/Kg	☼	06/15/20 08:00	06/22/20 16:57	5
Iron	6900		5.0	4.1	mg/Kg	☼	06/15/20 08:00	06/22/20 14:23	1
Manganese	220		0.75	0.11	mg/Kg	☼	06/15/20 08:00	06/22/20 14:23	1
Selenium	ND		0.50	0.17	mg/Kg	☼	06/15/20 08:00	06/22/20 14:23	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	52000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.94		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.15	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	10		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	49000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1200		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.2		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	70000		100	16	mg/Kg	☼	05/29/20 08:00	06/23/20 15:27	10
Beryllium	0.73		0.50	0.015	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Cadmium	1.4		0.50	0.022	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Cobalt	12	J	25	0.26	mg/Kg	☼	05/29/20 08:00	06/23/20 15:27	10
Iron	43000		10	8.2	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Manganese	1300		1.5	0.22	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Selenium	0.50	J	1.0	0.34	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11

Date Collected: 05/16/20 16:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 73.6

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	31	J	54	8.7	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4
Beryllium	ND		1.4	0.42	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4
Cadmium	ND		1.4	0.087	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4
Cobalt	0.43	J	14	0.24	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4
Iron	ND		27	16	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4
Manganese	5.5		4.1	0.17	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4
Selenium	ND		2.7	0.92	mg/Kg	☼	06/02/20 08:00	06/16/20 13:28	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17	J *	41	6.5	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3
Beryllium	ND	*	1.0	0.065	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3
Cadmium	ND		1.0	0.045	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3
Cobalt	ND		10	0.26	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3
Iron	ND	*	20	12	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3
Manganese	ND		3.1	1.1	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3
Selenium	ND		2.0	0.69	mg/Kg	☼	06/03/20 08:00	06/16/20 15:24	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	190		14	2.9	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1
Beryllium	0.13	J	0.34	0.020	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1
Cadmium	0.041	J B *	0.34	0.015	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1
Cobalt	17		3.4	0.061	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1
Iron	640		6.8	3.9	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1
Manganese	480	B	1.0	0.037	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1
Selenium	0.30	J	0.68	0.23	mg/Kg	☼	06/08/20 08:00	06/18/20 13:18	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2100		14	2.2	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1
Beryllium	0.57		0.34	0.022	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1
Cadmium	ND		0.34	0.015	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1
Cobalt	3.5		3.4	0.072	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1
Iron	6200		6.8	3.9	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1
Manganese	200		1.0	0.18	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1
Selenium	1.4	B *	0.68	0.64	mg/Kg	☼	06/10/20 08:00	06/18/20 15:10	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	360	**1	200	32	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5
Beryllium	ND	*	5.1	0.43	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5
Cadmium	ND		5.1	0.22	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5
Cobalt	ND	*	51	0.82	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5
Iron	ND	**1	100	60	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5
Manganese	ND	*	15	2.5	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5
Selenium	ND		10	3.5	mg/Kg	☼	06/12/20 08:00	06/19/20 12:51	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13000		14	2.2	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11

Date Collected: 05/16/20 16:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 73.6

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.39		0.34	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Cadmium	ND		0.34	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Cobalt	5.1		3.4	0.063	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Iron	14000		6.8	3.9	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Manganese	210		1.0	0.34	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Selenium	0.39	J	0.68	0.23	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	43000		140	22	mg/Kg	☼	06/15/20 08:00	06/22/20 16:06	10
Beryllium	0.51		0.34	0.010	mg/Kg	☼	06/15/20 08:00	06/22/20 14:29	1
Cadmium	0.12	J	0.34	0.015	mg/Kg	☼	06/15/20 08:00	06/22/20 14:29	1
Cobalt	0.91	J	3.4	0.035	mg/Kg	☼	06/15/20 08:00	06/22/20 14:29	1
Iron	8500		6.8	5.6	mg/Kg	☼	06/15/20 08:00	06/22/20 14:29	1
Manganese	48		1.0	0.15	mg/Kg	☼	06/15/20 08:00	06/22/20 14:29	1
Selenium	ND		0.68	0.23	mg/Kg	☼	06/15/20 08:00	06/22/20 14:29	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	58000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	1.6		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.16	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	26		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	29000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	940		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.1		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100000		140	22	mg/Kg	☼	05/29/20 08:00	06/23/20 15:32	10
Beryllium	2.0		0.34	0.010	mg/Kg	☼	05/29/20 08:00	06/23/20 13:55	1
Cadmium	0.44	J	0.68	0.030	mg/Kg	☼	05/29/20 08:00	06/23/20 17:14	2
Cobalt	41		34	0.35	mg/Kg	☼	05/29/20 08:00	06/23/20 15:32	10
Iron	36000		14	11	mg/Kg	☼	05/29/20 08:00	06/23/20 17:14	2
Manganese	1200		1.0	0.15	mg/Kg	☼	05/29/20 08:00	06/23/20 13:55	1
Selenium	0.62	J	1.4	0.46	mg/Kg	☼	05/29/20 08:00	06/23/20 17:14	2

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-53D 36 FT BGS

Lab Sample ID: 140-19131-12

Date Collected: 05/16/20 16:25

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.0

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		49	7.8	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4
Beryllium	ND		1.2	0.38	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4
Cadmium	ND		1.2	0.078	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4
Cobalt	ND		12	0.22	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4
Iron	ND		24	14	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4
Manganese	0.89	J	3.7	0.15	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4
Selenium	ND		2.4	0.83	mg/Kg	☼	06/02/20 08:00	06/16/20 13:33	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6.8	J *	37	5.9	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3
Beryllium	0.14	J *	0.91	0.059	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3
Cadmium	ND		0.91	0.040	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3
Cobalt	ND		9.1	0.23	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3
Iron	ND	*	18	11	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3
Manganese	ND		2.7	1.0	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3
Selenium	0.70	J	1.8	0.62	mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	140		12	2.6	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1
Beryllium	0.23	J	0.30	0.018	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1
Cadmium	0.060	J B *	0.30	0.013	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1
Cobalt	1.0	J	3.0	0.055	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1
Iron	70		6.1	3.5	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1
Manganese	74	B	0.91	0.033	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1
Selenium	0.25	J	0.61	0.21	mg/Kg	☼	06/08/20 08:00	06/18/20 13:23	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2000		12	2.0	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1
Beryllium	0.42		0.30	0.020	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1
Cadmium	0.035	J	0.30	0.013	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1
Cobalt	0.63	J	3.0	0.065	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1
Iron	1800		6.1	3.5	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1
Manganese	56		0.91	0.16	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1
Selenium	0.91	B *	0.61	0.57	mg/Kg	☼	06/10/20 08:00	06/18/20 15:15	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	240	**1	180	29	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5
Beryllium	ND	*	4.6	0.38	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5
Cadmium	ND		4.6	0.20	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5
Cobalt	ND	*	46	0.73	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5
Iron	ND	**1	91	54	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5
Manganese	ND	*	14	2.3	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5
Selenium	ND		9.1	3.2	mg/Kg	☼	06/12/20 08:00	06/19/20 12:57	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17000		12	2.0	mg/Kg	☼	06/12/20 08:00	06/19/20 16:49	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-53D 36 FT BGS

Lab Sample ID: 140-19131-12

Date Collected: 05/16/20 16:25

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.0

Method: 6010B SEP - SEP Metals (ICP) - Step 6 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.70		0.30	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 16:49	1
Cadmium	ND		0.30	0.013	mg/Kg	☼	06/12/20 08:00	06/19/20 16:49	1
Cobalt	6.9		6.1	0.11	mg/Kg	☼	06/12/20 08:00	06/19/20 17:26	2
Iron	20000		6.1	3.5	mg/Kg	☼	06/12/20 08:00	06/19/20 16:49	1
Manganese	290		0.91	0.30	mg/Kg	☼	06/12/20 08:00	06/19/20 16:49	1
Selenium	0.48	J	0.61	0.21	mg/Kg	☼	06/12/20 08:00	06/19/20 16:49	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	48000		120	20	mg/Kg	☼	06/15/20 08:00	06/22/20 16:11	10
Beryllium	0.42		0.30	0.0091	mg/Kg	☼	06/15/20 08:00	06/22/20 14:34	1
Cadmium	0.23	J	0.30	0.013	mg/Kg	☼	06/15/20 08:00	06/22/20 14:34	1
Cobalt	0.27	J	15	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 17:02	5
Iron	5000		6.1	5.0	mg/Kg	☼	06/15/20 08:00	06/22/20 14:34	1
Manganese	55		0.91	0.13	mg/Kg	☼	06/15/20 08:00	06/22/20 14:34	1
Selenium	ND		0.61	0.21	mg/Kg	☼	06/15/20 08:00	06/22/20 14:34	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	68000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	1.9		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.33		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	8.8		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	27000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	480		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.4		0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	80000		120	20	mg/Kg	☼	05/29/20 08:00	06/23/20 15:37	10
Beryllium	1.7		0.30	0.0091	mg/Kg	☼	05/29/20 08:00	06/23/20 14:01	1
Cadmium	0.67		0.30	0.013	mg/Kg	☼	05/29/20 08:00	06/23/20 14:01	1
Cobalt	9.6	J	15	0.16	mg/Kg	☼	05/29/20 08:00	06/23/20 17:19	5
Iron	24000		6.1	5.0	mg/Kg	☼	05/29/20 08:00	06/23/20 14:01	1
Manganese	460		0.91	0.13	mg/Kg	☼	05/29/20 08:00	06/23/20 14:01	1
Selenium	ND		0.61	0.21	mg/Kg	☼	05/29/20 08:00	06/23/20 14:01	1

Default Detection Limits

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

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
Manganese	0.75	0.031	mg/Kg
Selenium	0.50	0.17	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Prep: 3010A

SEP: Carbonate

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.016	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.063	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.28	mg/Kg
Selenium	0.50	0.17	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Prep: 3010A

SEP: Non-Crystalline

Analyte	RL	MDL	Units
Aluminum	10	2.1	mg/Kg
Beryllium	0.25	0.015	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.027	mg/Kg
Selenium	0.50	0.17	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Prep: 3010A

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Aluminum	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
Manganese	0.75	0.13	mg/Kg
Selenium	0.50	0.47	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Aluminum	30	4.7	mg/Kg
Beryllium	0.75	0.063	mg/Kg

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Default Detection Limits

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B SEP - SEP Metals (ICP) - Step 5 (Continued)

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Cadmium	0.75	0.032	mg/Kg
Cobalt	7.5	0.12	mg/Kg
Iron	15	8.8	mg/Kg
Manganese	2.3	0.37	mg/Kg
Selenium	1.5	0.52	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 6

SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Aluminum	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
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
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
Manganese	0.75	0.052	mg/Kg
Selenium	0.50	0.17	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.0075	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.026	mg/Kg
Iron	5.0	4.1	mg/Kg
Manganese	0.75	0.11	mg/Kg
Selenium	0.50	0.17	mg/Kg

QC Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B - SEP Metals (ICP) - Total

Lab Sample ID: MB 140-39918/15-A
Matrix: Solid
Analysis Batch: 40512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39918

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Beryllium	ND		0.25	0.0075	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Cadmium	ND		0.25	0.011	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Cobalt	ND		2.5	0.026	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Iron	ND		5.0	4.1	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Manganese	ND		0.75	0.11	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Selenium	ND		0.50	0.17	mg/Kg		05/29/20 08:00	06/23/20 12:12	1

Lab Sample ID: LCS 140-39918/16-A
Matrix: Solid
Analysis Batch: 40512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39918

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	103		mg/Kg		103	75 - 125
Beryllium	2.50	2.51		mg/Kg		100	75 - 125
Cadmium	2.50	2.63		mg/Kg		105	75 - 125
Cobalt	5.00	5.37		mg/Kg		107	75 - 125
Iron	50.0	52.3		mg/Kg		105	75 - 125
Manganese	5.00	5.34		mg/Kg		107	75 - 125
Selenium	7.50	7.60		mg/Kg		101	75 - 125

Lab Sample ID: LCSD 140-39918/17-A
Matrix: Solid
Analysis Batch: 40512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39918

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	102		mg/Kg		102	75 - 125	1	30
Beryllium	2.50	2.48		mg/Kg		99	75 - 125	1	30
Cadmium	2.50	2.62		mg/Kg		105	75 - 125	1	30
Cobalt	5.00	5.33		mg/Kg		107	75 - 125	1	30
Iron	50.0	51.3		mg/Kg		103	75 - 125	2	30
Manganese	5.00	5.29		mg/Kg		106	75 - 125	1	30
Selenium	7.50	7.53		mg/Kg		100	75 - 125	1	30

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-40011/15-B ^4
Matrix: Solid
Analysis Batch: 40383

Client Sample ID: Method Blank
Prep Type: Step 1
Prep Batch: 40023

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		40	6.4	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Beryllium	ND		1.0	0.31	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Cadmium	ND		1.0	0.064	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Cobalt	ND		10	0.18	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Iron	ND		20	12	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Manganese	ND		3.0	0.12	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Selenium	ND		2.0	0.68	mg/Kg		06/02/20 08:00	06/16/20 11:55	4

Eurofins TestAmerica, Knoxville

QC Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-40011/16-B ^5
Matrix: Solid
Analysis Batch: 40383

Client Sample ID: Lab Control Sample
Prep Type: Step 1
Prep Batch: 40023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	100		mg/Kg		100	75 - 125
Beryllium	2.50	2.49		mg/Kg		100	75 - 125
Cadmium	2.50	2.42		mg/Kg		97	75 - 125
Cobalt	5.00	4.76	J	mg/Kg		95	75 - 125
Iron	50.0	49.3		mg/Kg		99	75 - 125
Manganese	5.00	4.92		mg/Kg		98	75 - 125
Selenium	7.50	7.25		mg/Kg		97	75 - 125

Lab Sample ID: LCSD 140-40011/17-B ^5
Matrix: Solid
Analysis Batch: 40383

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 1
Prep Batch: 40023

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	102		mg/Kg		102	75 - 125	2	30
Beryllium	2.50	2.63		mg/Kg		105	75 - 125	6	30
Cadmium	2.50	2.55		mg/Kg		102	75 - 125	5	30
Cobalt	5.00	5.03	J	mg/Kg		101	75 - 125	5	30
Iron	50.0	51.3		mg/Kg		103	75 - 125	4	30
Manganese	5.00	5.18		mg/Kg		104	75 - 125	5	30
Selenium	7.50	7.87		mg/Kg		105	75 - 125	8	30

Lab Sample ID: MB 140-40024/15-B ^3
Matrix: Solid
Analysis Batch: 40383

Client Sample ID: Method Blank
Prep Type: Step 2
Prep Batch: 40062

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		30	4.8	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Beryllium	ND		0.75	0.048	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Cadmium	ND		0.75	0.033	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Cobalt	ND		7.5	0.19	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Iron	ND		15	8.7	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Manganese	ND		2.3	0.84	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Selenium	ND		1.5	0.51	mg/Kg		06/03/20 08:00	06/16/20 13:48	3

Lab Sample ID: LCS 140-40024/16-B ^5
Matrix: Solid
Analysis Batch: 40383

Client Sample ID: Lab Control Sample
Prep Type: Step 2
Prep Batch: 40062

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	ND	*	mg/Kg		-1	75 - 125
Beryllium	2.50	1.28	J *	mg/Kg		51	75 - 125
Cadmium	2.50	2.35		mg/Kg		94	75 - 125
Cobalt	5.00	4.53	J	mg/Kg		91	75 - 125
Iron	50.0	ND	*	mg/Kg		5	75 - 125
Manganese	5.00	4.69		mg/Kg		94	75 - 125
Selenium	7.50	6.68		mg/Kg		89	75 - 125

QC Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCSD 140-40024/17-B ^5
Matrix: Solid
Analysis Batch: 40383

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 2
Prep Batch: 40062

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aluminum	100	ND	*	mg/Kg		-1	75 - 125	19	30	
Beryllium	2.50	1.33	*	mg/Kg		53	75 - 125	4	30	
Cadmium	2.50	2.43		mg/Kg		97	75 - 125	3	30	
Cobalt	5.00	4.67	J	mg/Kg		93	75 - 125	3	30	
Iron	50.0	ND	*	mg/Kg		7	75 - 125	25	30	
Manganese	5.00	4.85		mg/Kg		97	75 - 125	3	30	
Selenium	7.50	6.51		mg/Kg		87	75 - 125	3	30	

Lab Sample ID: MB 140-40065/15-B
Matrix: Solid
Analysis Batch: 40441

Client Sample ID: Method Blank
Prep Type: Step 3
Prep Batch: 40096

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Beryllium	ND		0.25	0.015	mg/Kg		06/08/20 08:00	06/18/20 11:44	1	
Cadmium	0.0820	J	0.25	0.011	mg/Kg		06/08/20 08:00	06/18/20 11:44	1	
Cobalt	ND		2.5	0.045	mg/Kg		06/08/20 08:00	06/18/20 11:44	1	
Iron	ND		5.0	2.9	mg/Kg		06/08/20 08:00	06/18/20 11:44	1	
Manganese	0.0490	J	0.75	0.027	mg/Kg		06/08/20 08:00	06/18/20 11:44	1	
Selenium	ND		0.50	0.17	mg/Kg		06/08/20 08:00	06/18/20 11:44	1	

Lab Sample ID: LCS 140-40065/16-B
Matrix: Solid
Analysis Batch: 40441

Client Sample ID: Lab Control Sample
Prep Type: Step 3
Prep Batch: 40096

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aluminum	100	91.6		mg/Kg		92	75 - 125			
Beryllium	2.50	2.52		mg/Kg		101	75 - 125			
Cadmium	2.50	1.31	*	mg/Kg		52	75 - 125			
Cobalt	5.00	4.55		mg/Kg		91	75 - 125			
Iron	50.0	49.4		mg/Kg		99	75 - 125			
Manganese	5.00	4.74		mg/Kg		95	75 - 125			
Selenium	7.50	7.72		mg/Kg		103	75 - 125			

Lab Sample ID: LCSD 140-40065/17-B
Matrix: Solid
Analysis Batch: 40441

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 3
Prep Batch: 40096

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aluminum	100	95.6		mg/Kg		96	75 - 125	4	30	
Beryllium	2.50	2.60		mg/Kg		104	75 - 125	3	30	
Cadmium	2.50	1.37	*	mg/Kg		55	75 - 125	4	30	
Cobalt	5.00	4.74		mg/Kg		95	75 - 125	4	30	
Iron	50.0	51.1		mg/Kg		102	75 - 125	3	30	
Manganese	5.00	4.91		mg/Kg		98	75 - 125	3	30	
Selenium	7.50	8.04		mg/Kg		107	75 - 125	4	30	

QC Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-40100/15-B
Matrix: Solid
Analysis Batch: 40441

Client Sample ID: Method Blank
Prep Type: Step 4
Prep Batch: 40214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Beryllium	ND		0.25	0.016	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Cadmium	ND		0.25	0.011	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Cobalt	ND		2.5	0.053	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Iron	ND		5.0	2.9	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Manganese	ND		0.75	0.13	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Selenium	0.953		0.50	0.47	mg/Kg		06/10/20 08:00	06/18/20 13:39	1

Lab Sample ID: LCS 140-40100/16-B
Matrix: Solid
Analysis Batch: 40441

Client Sample ID: Lab Control Sample
Prep Type: Step 4
Prep Batch: 40214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	99.1		mg/Kg		99	75 - 125
Beryllium	2.50	2.62		mg/Kg		105	75 - 125
Cadmium	2.50	2.70		mg/Kg		108	75 - 125
Cobalt	5.00	5.26		mg/Kg		105	75 - 125
Iron	50.0	50.9		mg/Kg		102	75 - 125
Manganese	5.00	5.14		mg/Kg		103	75 - 125
Selenium	7.50	0.825	*	mg/Kg		11	75 - 125

Lab Sample ID: LCSD 140-40100/17-B
Matrix: Solid
Analysis Batch: 40441

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 4
Prep Batch: 40214

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	99.2		mg/Kg		99	75 - 125	0	30
Beryllium	2.50	2.63		mg/Kg		105	75 - 125	1	30
Cadmium	2.50	2.72		mg/Kg		109	75 - 125	1	30
Cobalt	5.00	5.26		mg/Kg		105	75 - 125	0	30
Iron	50.0	50.8		mg/Kg		102	75 - 125	0	30
Manganese	5.00	5.20		mg/Kg		104	75 - 125	1	30
Selenium	7.50	0.620	*	mg/Kg		8	75 - 125	28	30

Lab Sample ID: MB 140-40215/15-B ^5
Matrix: Solid
Analysis Batch: 40453

Client Sample ID: Method Blank
Prep Type: Step 5
Prep Batch: 40276

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		150	24	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Beryllium	ND		3.8	0.32	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Cadmium	ND		3.8	0.16	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Cobalt	ND		38	0.60	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Iron	ND		75	44	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Manganese	ND		11	1.9	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Selenium	ND		7.5	2.6	mg/Kg		06/12/20 08:00	06/19/20 11:16	5

QC Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-40215/16-B ^5
Matrix: Solid
Analysis Batch: 40453

Client Sample ID: Lab Control Sample
Prep Type: Step 5
Prep Batch: 40276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	300	ND	*	mg/Kg		6	75 - 125
Beryllium	7.50	3.83	*	mg/Kg		51	75 - 125
Cadmium	7.50	7.94		mg/Kg		106	75 - 125
Cobalt	15.0	1.41	J *	mg/Kg		9	75 - 125
Iron	150	ND	*	mg/Kg		3	75 - 125
Manganese	15.0	3.49	J *	mg/Kg		23	75 - 125
Selenium	22.5	23.4		mg/Kg		104	75 - 125

Lab Sample ID: LCSD 140-40215/17-B ^5
Matrix: Solid
Analysis Batch: 40453

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 5
Prep Batch: 40276

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	300	ND	**1	mg/Kg		4	75 - 125	32	30
Beryllium	7.50	3.99	*	mg/Kg		53	75 - 125	4	30
Cadmium	7.50	8.24		mg/Kg		110	75 - 125	4	30
Cobalt	15.0	1.58	J *	mg/Kg		11	75 - 125	12	30
Iron	150	ND	**1	mg/Kg		4	75 - 125	34	30
Manganese	15.0	4.36	J *	mg/Kg		29	75 - 125	22	30
Selenium	22.5	24.8		mg/Kg		110	75 - 125	6	30

Lab Sample ID: MB 140-40277/15-A
Matrix: Solid
Analysis Batch: 40453

Client Sample ID: Method Blank
Prep Type: Step 6
Prep Batch: 40277

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		06/12/20 08:00	06/19/20 13:12	1
Beryllium	ND		0.25	0.012	mg/Kg		06/12/20 08:00	06/19/20 13:12	1
Cadmium	ND		0.25	0.011	mg/Kg		06/12/20 08:00	06/19/20 13:12	1
Cobalt	ND		2.5	0.046	mg/Kg		06/12/20 08:00	06/19/20 13:12	1
Iron	ND		5.0	2.9	mg/Kg		06/12/20 08:00	06/19/20 13:12	1
Manganese	ND		0.75	0.25	mg/Kg		06/12/20 08:00	06/19/20 13:12	1
Selenium	ND		0.50	0.17	mg/Kg		06/12/20 08:00	06/19/20 13:12	1

Lab Sample ID: LCS 140-40277/16-A
Matrix: Solid
Analysis Batch: 40453

Client Sample ID: Lab Control Sample
Prep Type: Step 6
Prep Batch: 40277

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	101		mg/Kg		101	75 - 125
Beryllium	2.50	2.63		mg/Kg		105	75 - 125
Cadmium	2.50	2.71		mg/Kg		108	75 - 125
Cobalt	5.00	5.22		mg/Kg		104	75 - 125
Iron	50.0	50.8		mg/Kg		102	75 - 125
Manganese	5.00	5.20		mg/Kg		104	75 - 125
Selenium	7.50	7.90		mg/Kg		105	75 - 125

QC Sample Results

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCSD 140-40277/17-A
Matrix: Solid
Analysis Batch: 40453

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 6
Prep Batch: 40277

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aluminum	100	100		mg/Kg		100	75 - 125	1	30	
Beryllium	2.50	2.61		mg/Kg		105	75 - 125	1	30	
Cadmium	2.50	2.70		mg/Kg		108	75 - 125	0	30	
Cobalt	5.00	5.20		mg/Kg		104	75 - 125	0	30	
Iron	50.0	50.5		mg/Kg		101	75 - 125	1	30	
Manganese	5.00	5.16		mg/Kg		103	75 - 125	1	30	
Selenium	7.50	7.92		mg/Kg		106	75 - 125	0	30	

Lab Sample ID: MB 140-40294/15-A
Matrix: Solid
Analysis Batch: 40487

Client Sample ID: Method Blank
Prep Type: Step 7
Prep Batch: 40294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Beryllium	ND		0.25	0.0075	mg/Kg		06/15/20 08:00	06/22/20 12:47	1	
Cadmium	ND		0.25	0.011	mg/Kg		06/15/20 08:00	06/22/20 12:47	1	
Cobalt	ND		2.5	0.026	mg/Kg		06/15/20 08:00	06/22/20 12:47	1	
Iron	ND		5.0	4.1	mg/Kg		06/15/20 08:00	06/22/20 12:47	1	
Manganese	ND		0.75	0.11	mg/Kg		06/15/20 08:00	06/22/20 12:47	1	
Selenium	ND		0.50	0.17	mg/Kg		06/15/20 08:00	06/22/20 12:47	1	

Lab Sample ID: LCS 140-40294/16-A
Matrix: Solid
Analysis Batch: 40487

Client Sample ID: Lab Control Sample
Prep Type: Step 7
Prep Batch: 40294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aluminum	100	103		mg/Kg		103	75 - 125			
Beryllium	2.50	2.47		mg/Kg		99	75 - 125			
Cadmium	2.50	2.46		mg/Kg		98	75 - 125			
Cobalt	5.00	5.06		mg/Kg		101	75 - 125			
Iron	50.0	53.3		mg/Kg		107	75 - 125			
Manganese	5.00	5.35		mg/Kg		107	75 - 125			
Selenium	7.50	6.95		mg/Kg		93	75 - 125			

Lab Sample ID: LCSD 140-40294/17-A
Matrix: Solid
Analysis Batch: 40487

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 7
Prep Batch: 40294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aluminum	100	103		mg/Kg		103	75 - 125	0	30	
Beryllium	2.50	2.47		mg/Kg		99	75 - 125	0	30	
Cadmium	2.50	2.45		mg/Kg		98	75 - 125	0	30	
Cobalt	5.00	5.03		mg/Kg		101	75 - 125	1	30	
Iron	50.0	53.3		mg/Kg		107	75 - 125	0	30	
Manganese	5.00	5.35		mg/Kg		107	75 - 125	0	30	
Selenium	7.50	6.96		mg/Kg		93	75 - 125	0	30	

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

Prep Batch: 39918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	Total	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	Total	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	Total	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	Total	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	Total	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	Total	
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	Total	
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	Total	
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	Total	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	Total	
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	Total	
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	Total	
MB 140-39918/15-A	Method Blank	Total/NA	Solid	Total	
LCS 140-39918/16-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-39918/17-A	Lab Control Sample Dup	Total/NA	Solid	Total	

SEP Batch: 40011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 1	Solid	Exchangeable	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 1	Solid	Exchangeable	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 1	Solid	Exchangeable	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 1	Solid	Exchangeable	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 1	Solid	Exchangeable	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 1	Solid	Exchangeable	
140-19131-7	PZ-52D 18 FT BGS	Step 1	Solid	Exchangeable	
140-19131-8	PZ-52D 24-25 FT BGS	Step 1	Solid	Exchangeable	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 1	Solid	Exchangeable	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 1	Solid	Exchangeable	
140-19131-11	PZ-53D 30 FT BGS	Step 1	Solid	Exchangeable	
140-19131-12	PZ-53D 36 FT BGS	Step 1	Solid	Exchangeable	
MB 140-40011/15-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-40011/16-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-40011/17-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	

Prep Batch: 40023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 1	Solid	3010A	40011
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 1	Solid	3010A	40011
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 1	Solid	3010A	40011
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 1	Solid	3010A	40011
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 1	Solid	3010A	40011
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 1	Solid	3010A	40011
140-19131-7	PZ-52D 18 FT BGS	Step 1	Solid	3010A	40011
140-19131-8	PZ-52D 24-25 FT BGS	Step 1	Solid	3010A	40011
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 1	Solid	3010A	40011
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 1	Solid	3010A	40011
140-19131-11	PZ-53D 30 FT BGS	Step 1	Solid	3010A	40011
140-19131-12	PZ-53D 36 FT BGS	Step 1	Solid	3010A	40011
MB 140-40011/15-B ^4	Method Blank	Step 1	Solid	3010A	40011
LCS 140-40011/16-B ^5	Lab Control Sample	Step 1	Solid	3010A	40011
LCSD 140-40011/17-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	40011

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

SEP Batch: 40024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 2	Solid	Carbonate	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 2	Solid	Carbonate	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 2	Solid	Carbonate	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 2	Solid	Carbonate	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 2	Solid	Carbonate	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 2	Solid	Carbonate	
140-19131-7	PZ-52D 18 FT BGS	Step 2	Solid	Carbonate	
140-19131-8	PZ-52D 24-25 FT BGS	Step 2	Solid	Carbonate	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 2	Solid	Carbonate	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 2	Solid	Carbonate	
140-19131-11	PZ-53D 30 FT BGS	Step 2	Solid	Carbonate	
140-19131-12	PZ-53D 36 FT BGS	Step 2	Solid	Carbonate	
MB 140-40024/15-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-40024/16-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-40024/17-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	

Prep Batch: 40062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 2	Solid	3010A	40024
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 2	Solid	3010A	40024
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 2	Solid	3010A	40024
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 2	Solid	3010A	40024
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 2	Solid	3010A	40024
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 2	Solid	3010A	40024
140-19131-7	PZ-52D 18 FT BGS	Step 2	Solid	3010A	40024
140-19131-8	PZ-52D 24-25 FT BGS	Step 2	Solid	3010A	40024
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 2	Solid	3010A	40024
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 2	Solid	3010A	40024
140-19131-11	PZ-53D 30 FT BGS	Step 2	Solid	3010A	40024
140-19131-12	PZ-53D 36 FT BGS	Step 2	Solid	3010A	40024
MB 140-40024/15-B ^3	Method Blank	Step 2	Solid	3010A	40024
LCS 140-40024/16-B ^5	Lab Control Sample	Step 2	Solid	3010A	40024
LCSD 140-40024/17-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	40024

SEP Batch: 40065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-7	PZ-52D 18 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-8	PZ-52D 24-25 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-11	PZ-53D 30 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-12	PZ-53D 36 FT BGS	Step 3	Solid	Non-Crystalline	
MB 140-40065/15-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-40065/16-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-40065/17-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

Prep Batch: 40096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 3	Solid	3010A	40065
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 3	Solid	3010A	40065
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 3	Solid	3010A	40065
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 3	Solid	3010A	40065
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 3	Solid	3010A	40065
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 3	Solid	3010A	40065
140-19131-7	PZ-52D 18 FT BGS	Step 3	Solid	3010A	40065
140-19131-8	PZ-52D 24-25 FT BGS	Step 3	Solid	3010A	40065
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 3	Solid	3010A	40065
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 3	Solid	3010A	40065
140-19131-11	PZ-53D 30 FT BGS	Step 3	Solid	3010A	40065
140-19131-12	PZ-53D 36 FT BGS	Step 3	Solid	3010A	40065
MB 140-40065/15-B	Method Blank	Step 3	Solid	3010A	40065
LCS 140-40065/16-B	Lab Control Sample	Step 3	Solid	3010A	40065
LCSD 140-40065/17-B	Lab Control Sample Dup	Step 3	Solid	3010A	40065

SEP Batch: 40100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-7	PZ-52D 18 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-8	PZ-52D 24-25 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-11	PZ-53D 30 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-12	PZ-53D 36 FT BGS	Step 4	Solid	Metal Hydroxide	
MB 140-40100/15-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-40100/16-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-40100/17-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	

Prep Batch: 40214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 4	Solid	3010A	40100
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 4	Solid	3010A	40100
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 4	Solid	3010A	40100
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 4	Solid	3010A	40100
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 4	Solid	3010A	40100
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 4	Solid	3010A	40100
140-19131-7	PZ-52D 18 FT BGS	Step 4	Solid	3010A	40100
140-19131-8	PZ-52D 24-25 FT BGS	Step 4	Solid	3010A	40100
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 4	Solid	3010A	40100
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 4	Solid	3010A	40100
140-19131-11	PZ-53D 30 FT BGS	Step 4	Solid	3010A	40100
140-19131-12	PZ-53D 36 FT BGS	Step 4	Solid	3010A	40100
MB 140-40100/15-B	Method Blank	Step 4	Solid	3010A	40100
LCS 140-40100/16-B	Lab Control Sample	Step 4	Solid	3010A	40100
LCSD 140-40100/17-B	Lab Control Sample Dup	Step 4	Solid	3010A	40100

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

SEP Batch: 40215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-7	PZ-52D 18 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-8	PZ-52D 24-25 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-11	PZ-53D 30 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-12	PZ-53D 36 FT BGS	Step 5	Solid	Organic-Bound	
MB 140-40215/15-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-40215/16-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-40215/17-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	

Prep Batch: 40276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 5	Solid	3010A	40215
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 5	Solid	3010A	40215
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 5	Solid	3010A	40215
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 5	Solid	3010A	40215
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 5	Solid	3010A	40215
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 5	Solid	3010A	40215
140-19131-7	PZ-52D 18 FT BGS	Step 5	Solid	3010A	40215
140-19131-8	PZ-52D 24-25 FT BGS	Step 5	Solid	3010A	40215
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 5	Solid	3010A	40215
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 5	Solid	3010A	40215
140-19131-11	PZ-53D 30 FT BGS	Step 5	Solid	3010A	40215
140-19131-12	PZ-53D 36 FT BGS	Step 5	Solid	3010A	40215
MB 140-40215/15-B ^5	Method Blank	Step 5	Solid	3010A	40215
LCS 140-40215/16-B ^5	Lab Control Sample	Step 5	Solid	3010A	40215
LCSD 140-40215/17-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	40215

SEP Batch: 40277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-7	PZ-52D 18 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-8	PZ-52D 24-25 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-11	PZ-53D 30 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-12	PZ-53D 36 FT BGS	Step 6	Solid	Acid/Sulfide	
MB 140-40277/15-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-40277/16-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-40277/17-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

Prep Batch: 40294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	Residual	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	Residual	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	Residual	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	Residual	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	Residual	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	Residual	
140-19131-7	PZ-52D 18 FT BGS	Step 7	Solid	Residual	
140-19131-8	PZ-52D 24-25 FT BGS	Step 7	Solid	Residual	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 7	Solid	Residual	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	Residual	
140-19131-11	PZ-53D 30 FT BGS	Step 7	Solid	Residual	
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	Residual	
MB 140-40294/15-A	Method Blank	Step 7	Solid	Residual	
LCS 140-40294/16-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-40294/17-A	Lab Control Sample Dup	Step 7	Solid	Residual	

Analysis Batch: 40383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-7	PZ-52D 18 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-7	PZ-52D 18 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-8	PZ-52D 24-25 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-8	PZ-52D 24-25 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-11	PZ-53D 30 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-11	PZ-53D 30 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-12	PZ-53D 36 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-12	PZ-53D 36 FT BGS	Step 2	Solid	6010B SEP	40062
MB 140-40011/15-B ^4	Method Blank	Step 1	Solid	6010B SEP	40023
MB 140-40024/15-B ^3	Method Blank	Step 2	Solid	6010B SEP	40062
LCS 140-40011/16-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	40023
LCS 140-40024/16-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	40062
LCSD 140-40011/17-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	40023
LCSD 140-40024/17-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	40062

QC Association Summary

Client: Golder Associates Inc.
 Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

Analysis Batch: 40441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-7	PZ-52D 18 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-7	PZ-52D 18 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-8	PZ-52D 24-25 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-8	PZ-52D 24-25 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-11	PZ-53D 30 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-11	PZ-53D 30 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-12	PZ-53D 36 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-12	PZ-53D 36 FT BGS	Step 4	Solid	6010B SEP	40214
MB 140-40065/15-B	Method Blank	Step 3	Solid	6010B SEP	40096
MB 140-40100/15-B	Method Blank	Step 4	Solid	6010B SEP	40214
LCS 140-40065/16-B	Lab Control Sample	Step 3	Solid	6010B SEP	40096
LCS 140-40100/16-B	Lab Control Sample	Step 4	Solid	6010B SEP	40214
LCSD 140-40065/17-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	40096
LCSD 140-40100/17-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	40214

Analysis Batch: 40453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-7	PZ-52D 18 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-7	PZ-52D 18 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-7	PZ-52D 18 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-8	PZ-52D 24-25 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-8	PZ-52D 24-25 FT BGS	Step 6	Solid	6010B SEP	40277

QC Association Summary

Client: Golder Associates Inc.
 Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals (Continued)

Analysis Batch: 40453 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-11	PZ-53D 30 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-11	PZ-53D 30 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-12	PZ-53D 36 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-12	PZ-53D 36 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-12	PZ-53D 36 FT BGS	Step 6	Solid	6010B SEP	40277
MB 140-40215/15-B ^5	Method Blank	Step 5	Solid	6010B SEP	40276
MB 140-40277/15-A	Method Blank	Step 6	Solid	6010B SEP	40277
LCS 140-40215/16-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	40276
LCS 140-40277/16-A	Lab Control Sample	Step 6	Solid	6010B SEP	40277
LCSD 140-40215/17-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	40276
LCSD 140-40277/17-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	40277

Analysis Batch: 40487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-7	PZ-52D 18 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-7	PZ-52D 18 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-8	PZ-52D 24-25 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-8	PZ-52D 24-25 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-11	PZ-53D 30 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-11	PZ-53D 30 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	6010B SEP	40294

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals (Continued)

Analysis Batch: 40487 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	6010B SEP	40294
MB 140-40294/15-A	Method Blank	Step 7	Solid	6010B SEP	40294
LCS 140-40294/16-A	Lab Control Sample	Step 7	Solid	6010B SEP	40294
LCSD 140-40294/17-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	40294

Analysis Batch: 40512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	39918
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	39918
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	39918
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	39918
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	6010B	39918
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	6010B	39918
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	6010B	39918
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	6010B	39918
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	6010B	39918
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	6010B	39918
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	6010B	39918
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	6010B	39918
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	6010B	39918
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	6010B	39918
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	6010B	39918
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	6010B	39918
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	6010B	39918
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	6010B	39918
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	6010B	39918
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	6010B	39918
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	6010B	39918
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	6010B	39918
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	6010B	39918
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	6010B	39918
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	6010B	39918
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	6010B	39918
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	6010B	39918
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	6010B	39918
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	6010B	39918
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	6010B	39918
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	6010B	39918
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	6010B	39918
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	6010B	39918
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	6010B	39918
MB 140-39918/15-A	Method Blank	Total/NA	Solid	6010B	39918
LCS 140-39918/16-A	Lab Control Sample	Total/NA	Solid	6010B	39918
LCSD 140-39918/17-A	Lab Control Sample Dup	Total/NA	Solid	6010B	39918

Analysis Batch: 40572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	

QC Association Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals (Continued)

Analysis Batch: 40572 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-5	BRGWA-6S(2) 42 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-7	PZ-52D 18 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-8	PZ-52D 24-25 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-9	BRGWC-50(2) 59 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-11	PZ-53D 30 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-12	PZ-53D 36 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	

General Chemistry

Analysis Batch: 40042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	Moisture	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	Moisture	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	Moisture	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	Moisture	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	Moisture	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	Moisture	
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	Moisture	
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	Moisture	
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	Moisture	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	Moisture	
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	Moisture	
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	Moisture	
140-19131-1 DU	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
		Instrument ID: NOEQUIP								

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 71.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:43	KNC	TAL KNX
		Instrument ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:27	KNC	TAL KNX
		Instrument ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:04	KNC	TAL KNX
		Instrument ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		20			40512	06/23/20 17:24	KNC	TAL KNX
		Instrument ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 12:21	KNC	TAL KNX
		Instrument ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 14:15	KNC	TAL KNX
		Instrument ID: DUO								
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:10	KNC	TAL KNX
		Instrument ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:04	KNC	TAL KNX
		Instrument ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:43	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:38	KNC	TAL KNX
		Instrument ID: DUO								

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 71.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		2			40453	06/19/20 16:54	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 13:18	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:00	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:27	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

Date Collected: 05/13/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

Date Collected: 05/13/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 75.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:49	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:32	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		20			40512	06/23/20 17:29	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 12:26	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 14:20	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

Date Collected: 05/13/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 75.0

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	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:15	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:10	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:48	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:43	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 13:23	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:05	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:32	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3

Date Collected: 05/14/20 07:40

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3

Date Collected: 05/14/20 07:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:54	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:37	KNC	TAL KNX
Instrument ID: DUO										

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3

Date Collected: 05/14/20 07:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:15	KNC	TAL KNX
		Instrument ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 12:31	KNC	TAL KNX
		Instrument ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 14:25	KNC	TAL KNX
		Instrument ID: DUO								
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:20	KNC	TAL KNX
		Instrument ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:15	KNC	TAL KNX
		Instrument ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:53	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:48	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 13:29	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:10	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:37	KNC	TAL KNX
		Instrument ID: DUO								

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Lab Sample ID: 140-19131-4

Date Collected: 05/14/20 07:50

Matrix: Solid

Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			40572	06/25/20 11:53	DKW	TAL KNX
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
		Instrument ID: NOEQUIP								

Euofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Lab Sample ID: 140-19131-4

Date Collected: 05/14/20 07:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:16	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:41	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:21	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 12:36	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 14:31	KNC	TAL KNX
Instrument ID: DUO										
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:26	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:20	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:58	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:53	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 13:50	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:15	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:42	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
		Instrument ID: NOEQUIP								

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:46	KNC	TAL KNX
		Instrument ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:26	KNC	TAL KNX
		Instrument ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 12:57	KNC	TAL KNX
		Instrument ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 14:52	KNC	TAL KNX
		Instrument ID: DUO								
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:46	KNC	TAL KNX
		Instrument ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:40	KNC	TAL KNX
		Instrument ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:19	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:12	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 13:56	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:20	KNC	TAL KNX
		Instrument ID: DUO								

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:47	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:27	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:51	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:02	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 14:57	KNC	TAL KNX
Instrument ID: DUO										
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:51	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:45	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:25	KNC	TAL KNX
Instrument ID: DUO										

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:17	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:01	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:25	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:52	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7

Date Collected: 05/14/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7

Date Collected: 05/14/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 67.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:33	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:56	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:37	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:07	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:02	KNC	TAL KNX
Instrument ID: DUO										

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7

Date Collected: 05/14/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 67.3

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	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:57	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:50	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:30	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:22	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		2			40453	06/19/20 17:10	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:07	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:30	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: PZ-52D 24-25 FT BGS

Lab Sample ID: 140-19131-8

Date Collected: 05/14/20 14:50

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: PZ-52D 24-25 FT BGS

Lab Sample ID: 140-19131-8

Date Collected: 05/14/20 14:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:38	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:17	KNC	TAL KNX
Instrument ID: DUO										

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-52D 24-25 FT BGS

Lab Sample ID: 140-19131-8

Date Collected: 05/14/20 14:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:58	KNC	TAL KNX
		Instrument ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:12	KNC	TAL KNX
		Instrument ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:08	KNC	TAL KNX
		Instrument ID: DUO								
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 13:02	KNC	TAL KNX
		Instrument ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:55	KNC	TAL KNX
		Instrument ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:35	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:27	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:12	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:50	KNC	TAL KNX
		Instrument ID: DUO								

Client Sample ID: BRGWC-50(2) 59 FT BGS

Lab Sample ID: 140-19131-9

Date Collected: 05/15/20 09:00

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
		Instrument ID: NOEQUIP								

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 59 FT BGS

Lab Sample ID: 140-19131-9

Date Collected: 05/15/20 09:00

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:44	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:22	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			40512	06/23/20 17:03	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:18	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:13	KNC	TAL KNX
Instrument ID: DUO										
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 13:07	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 15:00	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:41	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:32	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		5			40453	06/19/20 17:15	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:18	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:55	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Lab Sample ID: 140-19131-10

Date Collected: 05/15/20 09:20

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
		Instrument ID: NOEQUIP								

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Lab Sample ID: 140-19131-10

Date Collected: 05/15/20 09:20

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 99.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:27	KNC	TAL KNX
		Instrument ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 17:08	KNC	TAL KNX
		Instrument ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:23	KNC	TAL KNX
		Instrument ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:18	KNC	TAL KNX
		Instrument ID: DUO								
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 13:12	KNC	TAL KNX
		Instrument ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 15:05	KNC	TAL KNX
		Instrument ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:46	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:38	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		5			40453	06/19/20 17:21	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:23	KNC	TAL KNX
		Instrument ID: DUO								

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Lab Sample ID: 140-19131-10

Date Collected: 05/15/20 09:20

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 99.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 16:00	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:57	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11

Date Collected: 05/16/20 16:15

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11

Date Collected: 05/16/20 16:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 73.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:55	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:32	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 17:14	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:28	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:24	KNC	TAL KNX
Instrument ID: DUO										
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 13:18	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11

Date Collected: 05/16/20 16:15

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 73.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 15:10	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:51	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:43	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:29	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 16:06	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: PZ-53D 36 FT BGS

Lab Sample ID: 140-19131-12

Date Collected: 05/16/20 16:25

Matrix: Solid

Date Received: 05/20/20 09:45

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			40572	06/25/20 11:53	DKW	TAL KNX
Instrument ID: NOEQUIP										
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Client Sample ID: PZ-53D 36 FT BGS

Lab Sample ID: 140-19131-12

Date Collected: 05/16/20 16:25

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 14:01	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:37	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			40512	06/23/20 17:19	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:33	KNC	TAL KNX
Instrument ID: DUO										

Eurofins TestAmerica, Knoxville

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: PZ-53D 36 FT BGS

Lab Sample ID: 140-19131-12

Date Collected: 05/16/20 16:25

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.0

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	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:29	KNC	TAL KNX
Instrument ID: DUO										
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 13:23	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 15:15	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:57	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:49	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		2			40453	06/19/20 17:26	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:34	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 16:11	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 17:02	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-39918/15-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	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:12	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40011/15-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	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 11:55	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40024/15-B ^3

Date Collected: N/A

Matrix: Solid

Date Received: N/A

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	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 13:48	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40065/15-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

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	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 11:44	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40100/15-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	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 13:39	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40215/15-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

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	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:16	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40277/15-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	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:12	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40294/15-A

Date Collected: N/A

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	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 12:47	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-39918/16-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	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:17	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40011/16-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	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			40383	06/16/20 12:00	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40024/16-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	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			40383	06/16/20 13:54	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40065/16-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	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 11:49	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40100/16-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	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 13:44	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40215/16-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	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:21	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40277/16-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	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:17	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40294/16-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	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 12:52	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-39918/17-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	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:22	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40011/17-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	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			40383	06/16/20 12:05	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40024/17-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	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			40383	06/16/20 13:59	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40065/17-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	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 11:54	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40100/17-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

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	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 13:49	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40215/17-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	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:27	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40277/17-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	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:22	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40294/17-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 12:57	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1 DU

Date Collected: 05/13/20 14:30

Matrix: Solid

Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
Instrument ID: NOEQUIP										

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Golder Associates Inc.
 Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

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	01-02-21

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	Manganese
6010B	Total	Solid	Selenium
6010B SEP		Solid	Aluminum
6010B SEP		Solid	Beryllium
6010B SEP		Solid	Cadmium
6010B SEP		Solid	Cobalt
6010B SEP		Solid	Iron
6010B SEP		Solid	Manganese
6010B SEP		Solid	Selenium
6010B SEP	3010A	Solid	Aluminum
6010B SEP	3010A	Solid	Beryllium
6010B SEP	3010A	Solid	Cadmium
6010B SEP	3010A	Solid	Cobalt
6010B SEP	3010A	Solid	Iron
6010B SEP	3010A	Solid	Manganese
6010B SEP	3010A	Solid	Selenium
6010B SEP	Acid/Sulfide	Solid	Aluminum
6010B SEP	Acid/Sulfide	Solid	Beryllium
6010B SEP	Acid/Sulfide	Solid	Cadmium
6010B SEP	Acid/Sulfide	Solid	Cobalt
6010B SEP	Acid/Sulfide	Solid	Iron
6010B SEP	Acid/Sulfide	Solid	Manganese
6010B SEP	Acid/Sulfide	Solid	Selenium
6010B SEP	Residual	Solid	Aluminum
6010B SEP	Residual	Solid	Beryllium
6010B SEP	Residual	Solid	Cadmium
6010B SEP	Residual	Solid	Cobalt
6010B SEP	Residual	Solid	Iron
6010B SEP	Residual	Solid	Manganese
6010B SEP	Residual	Solid	Selenium
Moisture		Solid	Percent Moisture

Method Summary

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

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



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: SGS Canada Inc
Project Number/ LIMS No. 17999-01/MI4501-JUN20
Sample Receipt: June 2, 2020
Sample Analysis: June 3, 2020
Reporting Date: June 5, 2020

Instrument: BRUKER AXS D8 Advance Diffractometer
Test Conditions: Co radiation, 35 kV, 40 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.
Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:
1) Method Summary
2) Quantitative XRD Results
3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geol.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geol.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	BRGWA - 2S (2) 40-43 Ft bgs JUN4501-01	BRGWA - 5S (2) 34-37 Ft bgs JUN4501-02	BRGWA - 6S (2) 44-48 Ft bgs JUN4501-03	BRGWC - 50 (2) 59 Ft bgs JUN4501-04	BRGWC - 50 (2) 63-63.5 Ft bgs JUN4501-05	PZ-52D 19-24 Ft bgs JUN4501-06	PZ-53D 32-35 Ft bgs JUN4501-07
	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)
Quartz	15.1	9.9	9.9	27.3	24.6	34.9	30.8
Hornblende	39.3	33.3	24.7	-	-	2.2	-
Andesine	4.8	-	-	-	-	-	-
Kaolinite	29.0	19.7	51.9	-	-	37.7	25.3
Gypsum	1.4	0.7	-	-	-	-	-
Lizardite	0.4	0.3	0.2	-	-	0.0	0.4
Microcline	3.6	2.0	5.6	3.0	9.3	10.8	17.1
Ilmenite	3.8	1.3	0.6	-	-	-	-
Montmorillonite	2.6	3.2	6.8	0.8	-	-	-
Stilpnomelane	-	11.1	-	-	-	-	-
Albite	-	18.2	-	49.9	50.1	4.0	5.7
Magnetite	-	0.3	0.3	0.3	0.5	0.5	0.1
Muscovite	-	-	-	4.2	2.6	3.8	3.5
Biotite	-	-	-	10.3	10.8	6.1	5.8
Illite-Montmorillonite	-	-	-	4.2	-	-	11.3
Chlorite	-	-	-	-	2.1	-	-
TOTAL	100	100	100	100	100	100	100

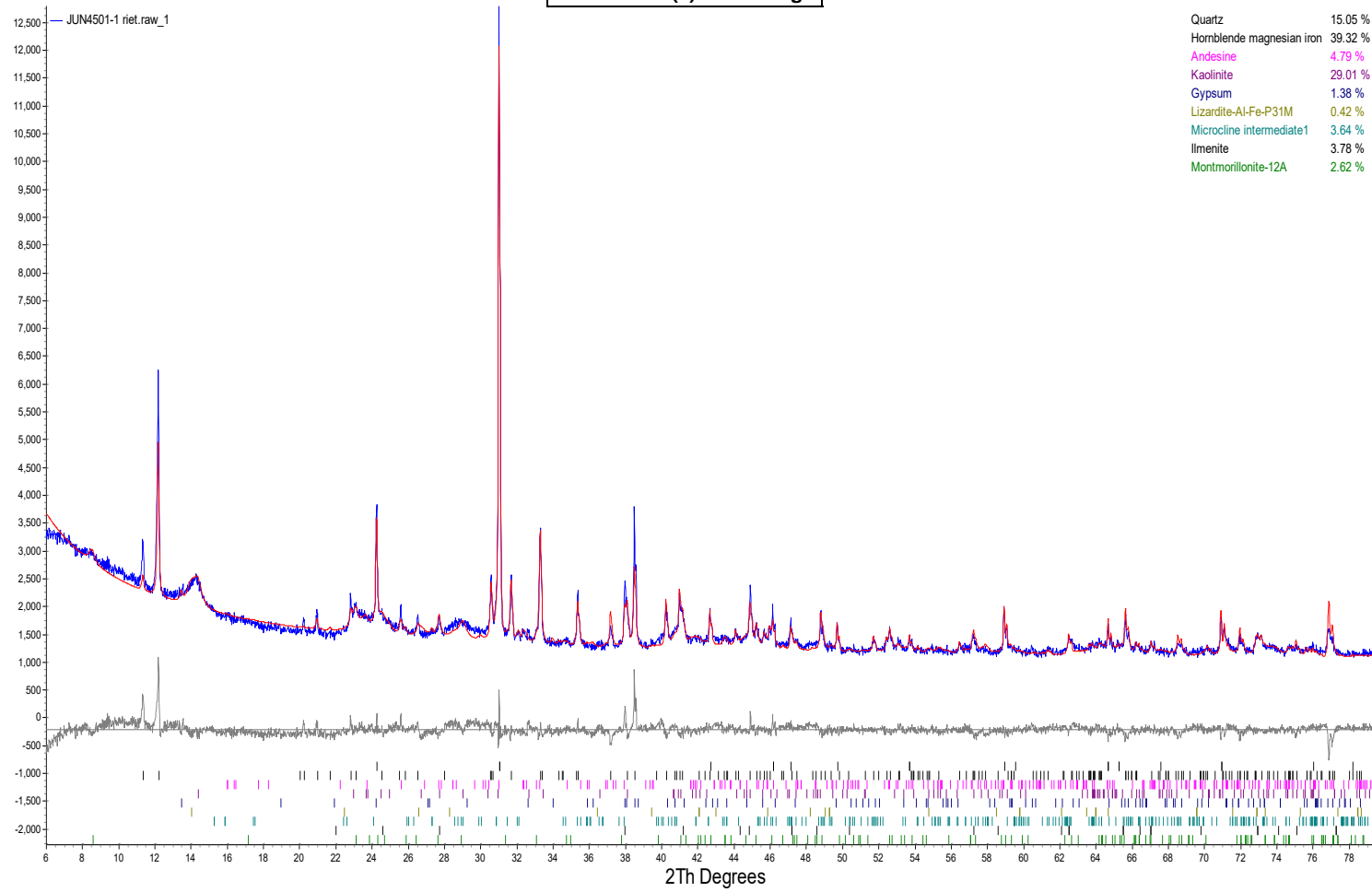
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

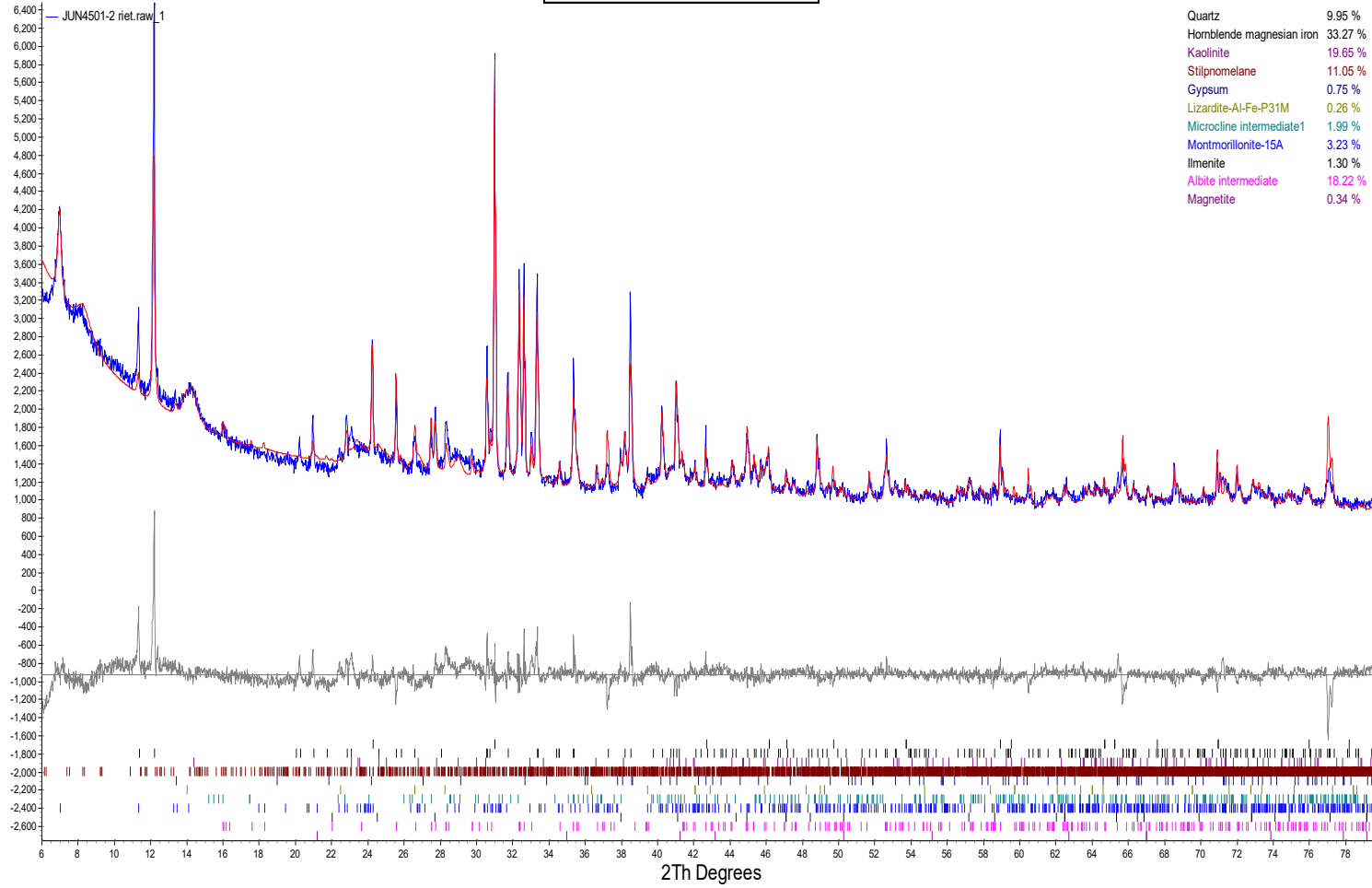
The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Hornblende	(Ca,Na) ₂₋₃ (Mg,Fe,Al) ₅ Si ₆ (Si,Al) ₂ O ₂₂ (OH) ₂
Andesine	Na _{0.6} Ca _{0.4} Al _{1.4} Si _{2.6} O ₈
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Gypsum	CaSO ₄ ·2H ₂ O
Lizardite	Mg ₃ Si ₂ O ₅ (OH) ₄
Microcline	KAlSi ₃ O ₈
Ilmenite	FeTiO ₃
Montmorillonite	(Na,Ca) _{0.3} (Al,Mg) ₂ Si ₂ O ₁₀ (OH) ₂ ·10H ₂ O
Stilpnomelane	K(Fe ²⁺ ,Mg,Fe ³⁺) ₈ (Si,Al) ₁₂ (O,OH) ₂₇ ·n(H ₂ O)
Albite	NaAlSi ₃ O ₈
Magnetite	Fe ₃ O ₄
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Biotite	K(Mg,Fe) ₃ (AlSi ₃ O ₁₀)(OH) ₂
Illite-Montmorillonite	KAl ₄ (Si,Al) ₈ O ₁₀ (OH) ₄ ·4H ₂ O
Chlorite	(Fe,(Mg,Mn) ₅ ,Al)(Si ₃ Al)O ₁₀ (OH) ₈

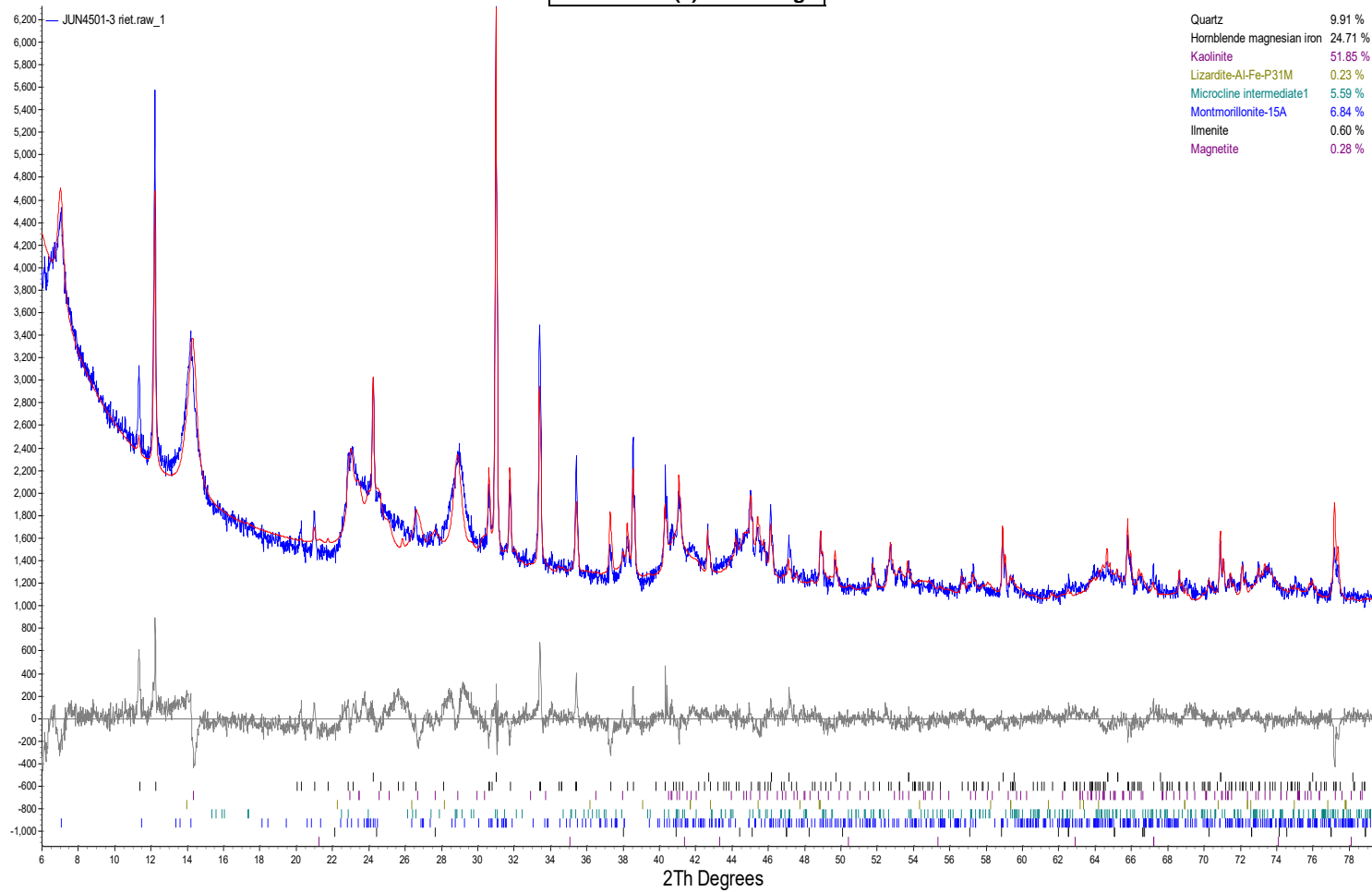
BRGWA - 2S (2) 40-43 Ft bgs



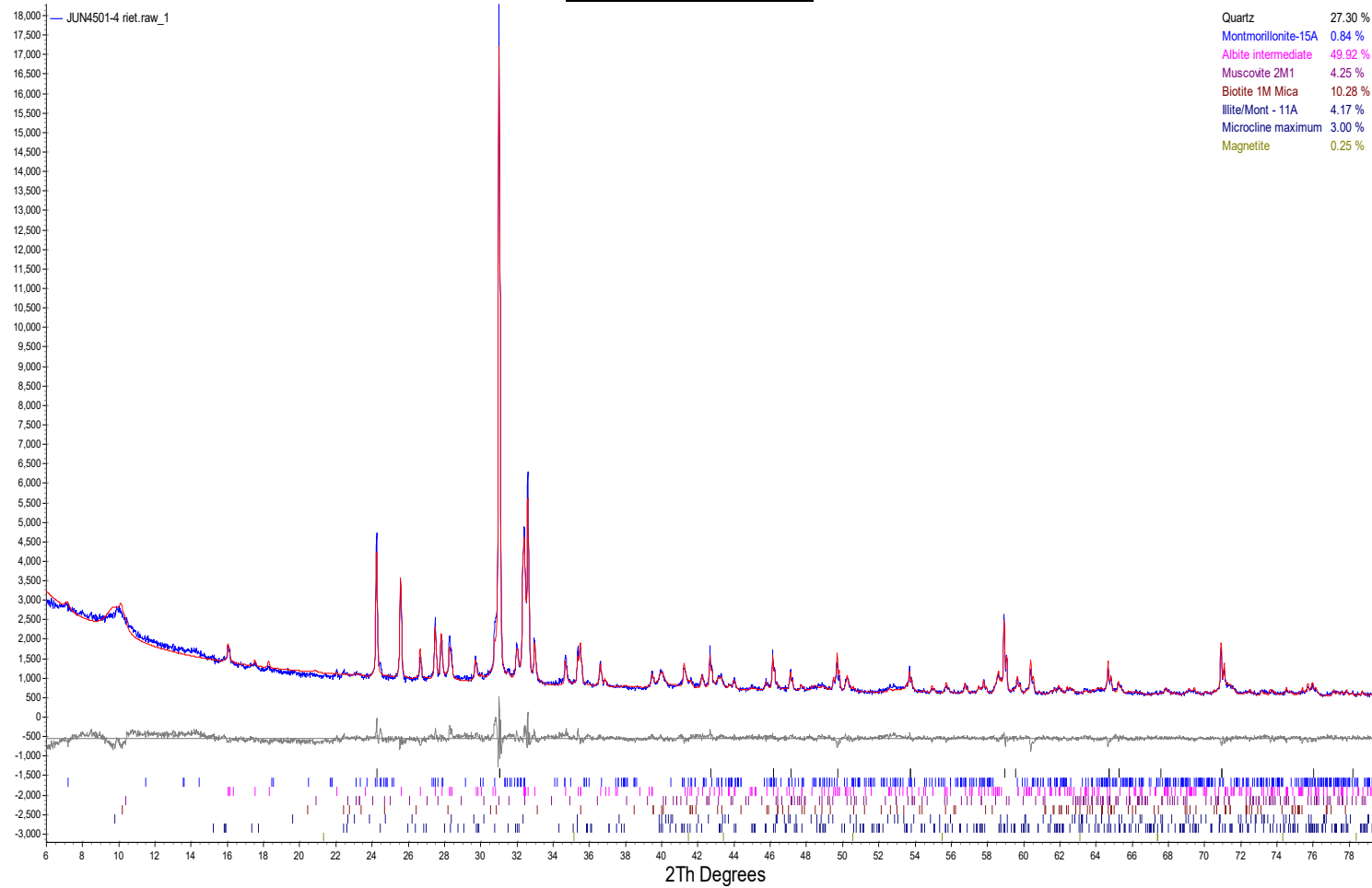
BRGWA - 5S (2) 34-37 Ft bgs



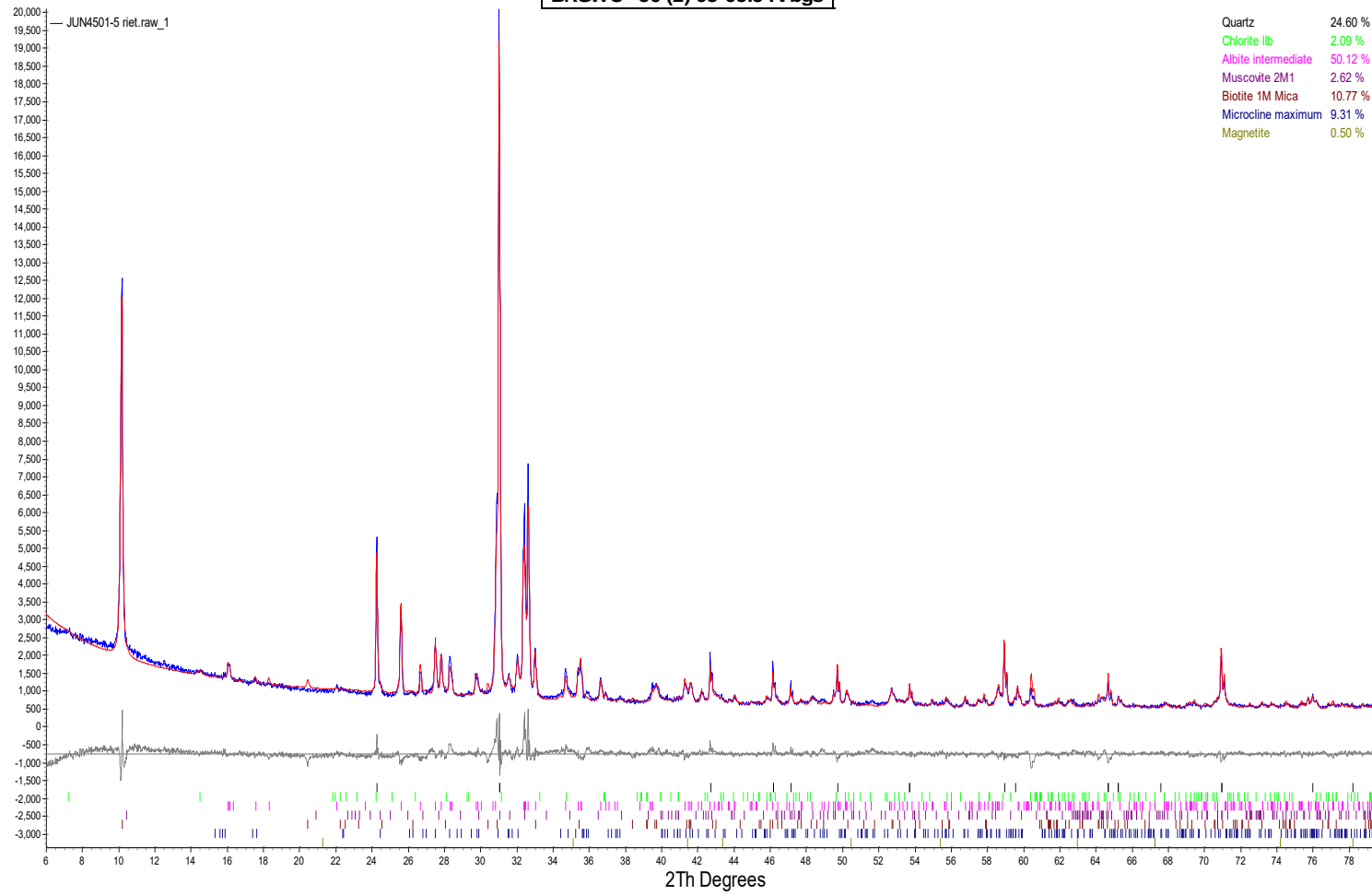
BRGWA - 6S (2) 44-48 Ft bgs



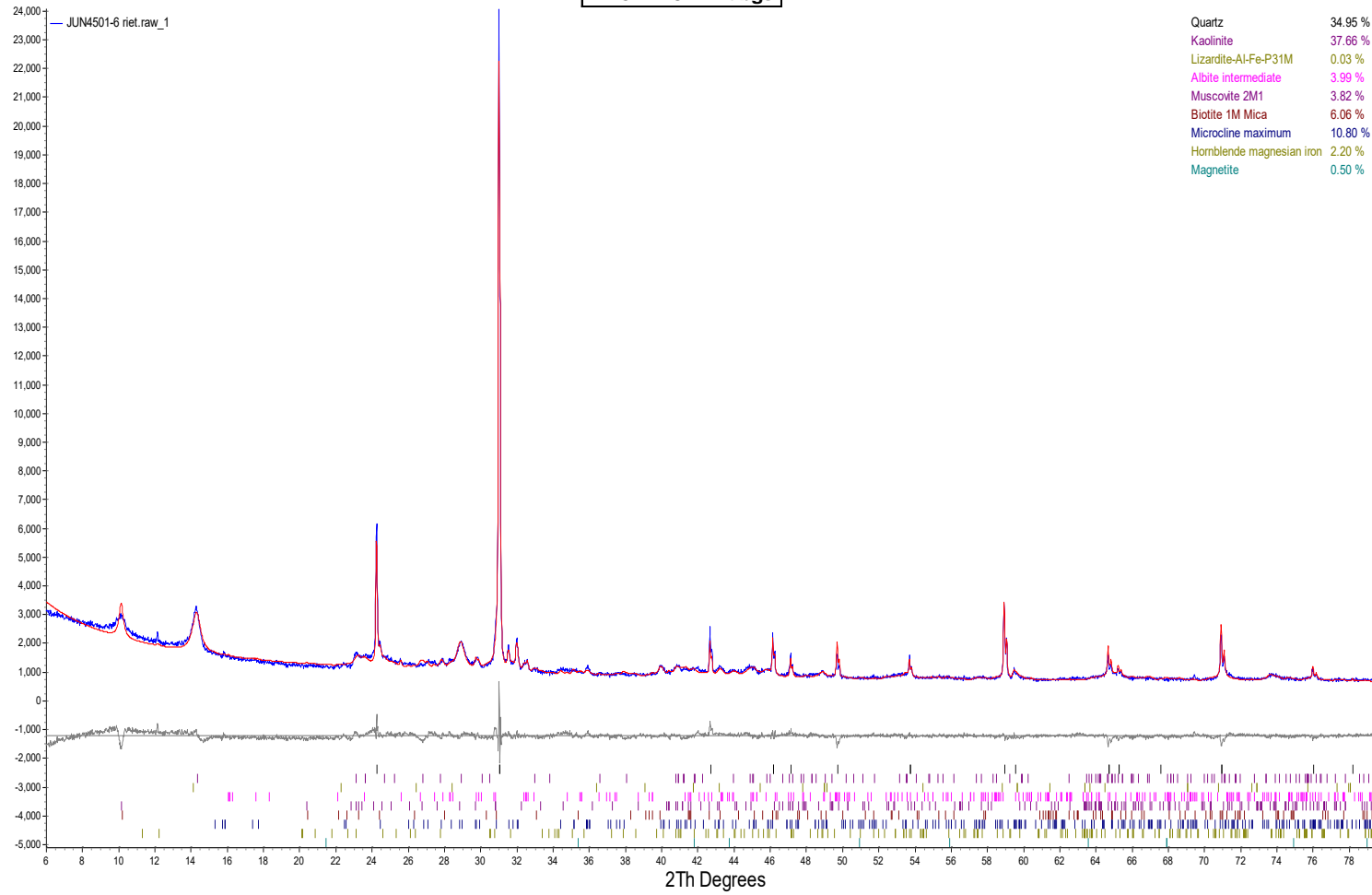
BRGWC - 50 (2) 59 Ft bgs



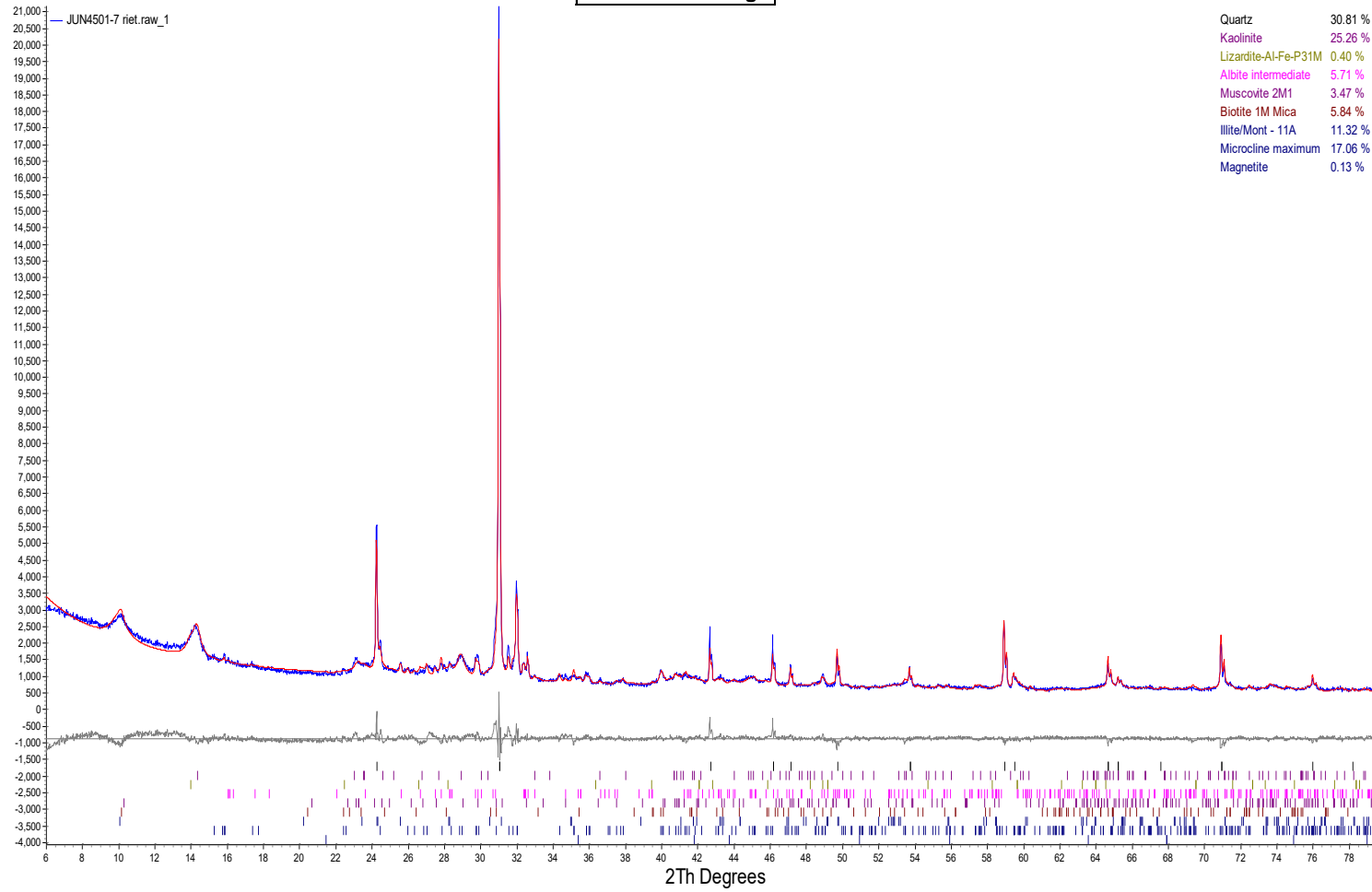
BRGWC - 50 (2) 63-63.5 Ft bgs



PZ-52D 19-24 Ft bgs



PZ-53D 32-35 Ft bgs



December 17, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2624659

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Branch

Pace Project No.: 2624659

Pace Analytical Services Atlanta

110 Technology Parkway 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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SAMPLE SUMMARY

Project: Plant Branch

Pace Project No.: 2624659

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624659001	PZ-15S	Water	10/21/19 14:01	10/23/19 00:00
2624659002	PZ-15I	Water	10/21/19 15:11	10/23/19 00:00
2624659003	IW-C-1	Water	10/21/19 16:41	10/23/19 00:00

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SAMPLE ANALYTE COUNT

Project: Plant Branch

Pace Project No.: 2624659

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624659001	PZ-15S	EPA 6010D	KLH	6
		EPA 6010D	KLH	6
		EPA 6020B	CSW	14
		EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		EPA 7470A	DRB	1
		SM 2320B	S1A	2
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
		2624659002	PZ-15I	EPA 6010D
EPA 6010D	KLH			6
EPA 6020B	CSW			14
EPA 6020B	CSW			14
EPA 7470A	DRB			1
EPA 7470A	DRB			1
SM 2320B	S1A			2
SM 2540C	MZP			1
SM 4500-P	JAD			1
EPA 300.0	MWB			1
EPA 300.0	MWB			3
2624659003	IW-C-1			EPA 6010D
		EPA 6010D	KLH	6
		EPA 6020B	CSW	14
		EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		EPA 7470A	DRB	1
		SM 2320B	S1A	2
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3

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ANALYTICAL RESULTS

Project: Plant Branch

Pace Project No.: 2624659

Sample: PZ-15S		Lab ID: 2624659001		Collected: 10/21/19 14:01		Received: 10/23/19 00:00		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	0.054J	mg/L	0.10	0.032	1	10/31/19 16:05	11/01/19 01:51	7429-90-5		
Iron	0.10	mg/L	0.040	0.015	1	10/31/19 16:05	11/01/19 01:51	7439-89-6		
Magnesium	11.2	mg/L	0.050	0.011	1	10/31/19 16:05	11/01/19 01:51	7439-95-4		
Manganese	1.9	mg/L	0.040	0.0061	1	10/31/19 16:05	11/01/19 01:51	7439-96-5		
Potassium	6.6	mg/L	0.20	0.026	1	10/31/19 16:05	11/01/19 01:51	7440-09-7		
Sodium	22.6	mg/L	1.0	0.19	1	10/31/19 16:05	11/01/19 01:51	7440-23-5		
6010D MET ICP, Lab Filtered		Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum, Dissolved	ND	mg/L	0.10	0.032	1	11/01/19 18:00	11/03/19 12:05	7429-90-5		
Iron, Dissolved	ND	mg/L	0.040	0.015	1	11/01/19 18:00	11/03/19 12:05	7439-89-6		
Magnesium, Dissolved	11.3	mg/L	0.050	0.011	1	11/01/19 18:00	11/03/19 12:05	7439-95-4		
Manganese, Dissolved	1.4	mg/L	0.040	0.0061	1	11/01/19 18:00	11/03/19 12:05	7439-96-5		
Potassium, Dissolved	6.5	mg/L	0.20	0.026	1	11/01/19 18:00	11/03/19 12:05	7440-09-7		
Sodium, Dissolved	22.3	mg/L	1.0	0.19	1	11/01/19 18:00	11/03/19 12:05	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/28/19 20:04	10/29/19 20:59	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/28/19 20:04	10/29/19 20:59	7440-38-2		
Barium	0.021	mg/L	0.010	0.00049	1	10/28/19 20:04	10/29/19 20:59	7440-39-3		
Beryllium	0.00019J	mg/L	0.0030	0.000074	1	10/28/19 20:04	10/29/19 20:59	7440-41-7		
Boron	1.3	mg/L	0.040	0.0049	1	10/28/19 20:04	10/29/19 20:59	7440-42-8		
Cadmium	0.00022J	mg/L	0.0025	0.00011	1	10/28/19 20:04	10/29/19 20:59	7440-43-9		
Calcium	55.6	mg/L	5.0	0.55	50	10/28/19 20:04	10/29/19 21:05	7440-70-2		
Chromium	0.00080J	mg/L	0.010	0.00039	1	10/28/19 20:04	10/29/19 20:59	7440-47-3		
Cobalt	0.0022J	mg/L	0.0050	0.00030	1	10/28/19 20:04	10/29/19 20:59	7440-48-4		
Lead	0.00021J	mg/L	0.0050	0.000046	1	10/28/19 20:04	10/29/19 20:59	7439-92-1		
Lithium	0.0059J	mg/L	0.030	0.00078	1	10/28/19 20:04	10/29/19 20:59	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/28/19 20:04	10/29/19 20:59	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/28/19 20:04	10/29/19 20:59	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/28/19 20:04	10/29/19 20:59	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00027	1	11/03/19 15:41	11/04/19 20:11	7440-36-0		
Arsenic, Dissolved	ND	mg/L	0.0050	0.00035	1	11/03/19 15:41	11/04/19 20:11	7440-38-2		
Barium, Dissolved	0.025	mg/L	0.010	0.00049	1	11/03/19 15:41	11/04/19 20:11	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/04/19 20:11	7440-41-7		
Boron, Dissolved	1.3	mg/L	0.040	0.0049	1	11/03/19 15:41	11/04/19 20:11	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 20:11	7440-43-9		
Calcium, Dissolved	51.6	mg/L	5.0	0.55	50	11/03/19 15:41	11/04/19 20:16	7440-70-2		
Chromium, Dissolved	ND	mg/L	0.010	0.00039	1	11/03/19 15:41	11/04/19 20:11	7440-47-3		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 20:11	7440-48-4		
Lead, Dissolved	ND	mg/L	0.0050	0.000046	1	11/03/19 15:41	11/04/19 20:11	7439-92-1		
Lithium, Dissolved	0.012J	mg/L	0.030	0.00078	1	11/03/19 15:41	11/04/19 20:11	7439-93-2		
Molybdenum, Dissolved	ND	mg/L	0.010	0.00095	1	11/03/19 15:41	11/04/19 20:11	7439-98-7		
Selenium, Dissolved	ND	mg/L	0.010	0.0013	1	11/03/19 15:41	11/04/19 20:11	7782-49-2		
Thallium, Dissolved	ND	mg/L	0.0010	0.000052	1	11/03/19 15:41	11/04/19 20:11	7440-28-0		

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ANALYTICAL RESULTS

Project: Plant Branch

Pace Project No.: 2624659

Sample: PZ-15S		Lab ID: 2624659001		Collected: 10/21/19 14:01	Received: 10/23/19 00:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	10/29/19 08:27	10/29/19 14:16	7439-97-6		
7470 Mercury, Dissolved		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	11/03/19 15:41	11/04/19 10:39	7439-97-6		
2320B Alkalinity Low Level		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO ₃)	12.0	mg/L	1.0	1.0	1		10/29/19 12:03			
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	1.0	1.0	1		10/29/19 12:03			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	356	mg/L	10.0	10.0	1		10/25/19 14:58			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/23/19 19:13		H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/24/19 06:40	14797-55-8	H1	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	6.4	mg/L	1.0	0.024	1		10/30/19 23:10	16887-00-6		
Fluoride	0.068J	mg/L	0.30	0.029	1		10/30/19 23:10	16984-48-8		
Sulfate	235	mg/L	50.0	0.85	50		10/31/19 08:00	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch

Pace Project No.: 2624659

Sample: PZ-151		Lab ID: 2624659002		Collected: 10/21/19 15:11		Received: 10/23/19 00:00		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/31/19 16:05	11/01/19 01:56	7429-90-5		
Iron	0.051	mg/L	0.040	0.015	1	10/31/19 16:05	11/01/19 01:56	7439-89-6		
Magnesium	23.1	mg/L	0.050	0.011	1	10/31/19 16:05	11/01/19 01:56	7439-95-4		
Manganese	0.17	mg/L	0.040	0.0061	1	10/31/19 16:05	11/01/19 01:56	7439-96-5		
Potassium	7.7	mg/L	0.20	0.026	1	10/31/19 16:05	11/01/19 01:56	7440-09-7		
Sodium	26.5	mg/L	1.0	0.19	1	10/31/19 16:05	11/01/19 01:56	7440-23-5		
6010D MET ICP, Lab Filtered		Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum, Dissolved	ND	mg/L	0.10	0.032	1	11/01/19 18:00	11/03/19 12:10	7429-90-5		
Iron, Dissolved	ND	mg/L	0.040	0.015	1	11/01/19 18:00	11/03/19 12:10	7439-89-6		
Magnesium, Dissolved	22.8	mg/L	0.050	0.011	1	11/01/19 18:00	11/03/19 12:10	7439-95-4		
Manganese, Dissolved	0.16	mg/L	0.040	0.0061	1	11/01/19 18:00	11/03/19 12:10	7439-96-5		
Potassium, Dissolved	7.7	mg/L	0.20	0.026	1	11/01/19 18:00	11/03/19 12:10	7440-09-7		
Sodium, Dissolved	26.3	mg/L	1.0	0.19	1	11/01/19 18:00	11/03/19 12:10	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/28/19 20:04	10/29/19 21:11	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/28/19 20:04	10/29/19 21:11	7440-38-2		
Barium	0.029	mg/L	0.010	0.00049	1	10/28/19 20:04	10/29/19 21:11	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/28/19 20:04	10/29/19 21:11	7440-41-7		
Boron	1.5	mg/L	0.040	0.0049	1	10/28/19 20:04	10/29/19 21:11	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/28/19 20:04	10/29/19 21:11	7440-43-9		
Calcium	51.0	mg/L	5.0	0.55	50	10/28/19 20:04	10/29/19 21:16	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/28/19 20:04	10/29/19 21:11	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/28/19 20:04	10/29/19 21:11	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	10/28/19 20:04	10/29/19 21:11	7439-92-1		
Lithium	0.013J	mg/L	0.030	0.00078	1	10/28/19 20:04	10/29/19 21:11	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/28/19 20:04	10/29/19 21:11	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/28/19 20:04	10/29/19 21:11	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/28/19 20:04	10/29/19 21:11	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00027	1	11/03/19 15:41	11/04/19 20:34	7440-36-0		
Arsenic, Dissolved	ND	mg/L	0.0050	0.00035	1	11/03/19 15:41	11/04/19 20:34	7440-38-2		
Barium, Dissolved	0.016	mg/L	0.010	0.00049	1	11/03/19 15:41	11/04/19 20:34	7440-39-3		
Beryllium, Dissolved	0.00016J	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:12	7440-41-7		
Boron, Dissolved	1.2	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:12	7440-42-8		
Cadmium, Dissolved	0.00017J	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 20:34	7440-43-9		
Calcium, Dissolved	50.0	mg/L	5.0	0.55	50	11/03/19 15:41	11/04/19 20:39	7440-70-2		
Chromium, Dissolved	ND	mg/L	0.010	0.00039	1	11/03/19 15:41	11/04/19 20:34	7440-47-3		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 20:34	7440-48-4		
Lead, Dissolved	ND	mg/L	0.0050	0.000046	1	11/03/19 15:41	11/04/19 20:34	7439-92-1		
Lithium, Dissolved	0.0056J	mg/L	0.030	0.00078	1	11/03/19 15:41	11/05/19 13:12	7439-93-2		
Molybdenum, Dissolved	ND	mg/L	0.010	0.00095	1	11/03/19 15:41	11/04/19 20:34	7439-98-7		
Selenium, Dissolved	ND	mg/L	0.010	0.0013	1	11/03/19 15:41	11/04/19 20:34	7782-49-2		
Thallium, Dissolved	ND	mg/L	0.0010	0.000052	1	11/03/19 15:41	11/04/19 20:34	7440-28-0		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch

Pace Project No.: 2624659

Sample: PZ-15I		Lab ID: 2624659002		Collected: 10/21/19 15:11		Received: 10/23/19 00:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	10/29/19 08:27	10/29/19 14:19	7439-97-6	
7470 Mercury, Dissolved		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	11/03/19 15:41	11/04/19 10:41	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO ₃)	24.0	mg/L	20.0	20.0	1		10/28/19 14:50		
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	20.0	20.0	1		10/28/19 14:50		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	430	mg/L	10.0	10.0	1		10/25/19 14:58		
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P							
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/23/19 19:14		H1
300.0 IC Anions		Analytical Method: EPA 300.0							
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/24/19 07:02	14797-55-8	H1
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	6.6	mg/L	1.0	0.024	1		10/30/19 23:32	16887-00-6	
Fluoride	0.15J	mg/L	0.30	0.029	1		10/30/19 23:32	16984-48-8	
Sulfate	266	mg/L	20.0	0.34	20		10/31/19 08:22	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch

Pace Project No.: 2624659

Sample: IW-C-1		Lab ID: 2624659003		Collected: 10/21/19 16:41		Received: 10/23/19 00:00		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/31/19 16:05	11/01/19 02:01	7429-90-5		
Iron	25.6	mg/L	0.040	0.015	1	10/31/19 16:05	11/01/19 02:01	7439-89-6		
Magnesium	40.2	mg/L	0.050	0.011	1	10/31/19 16:05	11/01/19 02:01	7439-95-4		
Manganese	4.3	mg/L	0.040	0.0061	1	10/31/19 16:05	11/01/19 02:01	7439-96-5		
Potassium	9.8	mg/L	0.20	0.026	1	10/31/19 16:05	11/01/19 02:01	7440-09-7		
Sodium	42.5	mg/L	10.0	1.9	10	10/31/19 16:05	11/03/19 02:17	7440-23-5		
6010D MET ICP, Lab Filtered		Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum, Dissolved	0.20	mg/L	0.10	0.032	1	11/01/19 18:00	11/03/19 12:15	7429-90-5		
Iron, Dissolved	0.11	mg/L	0.040	0.015	1	11/01/19 18:00	11/03/19 12:15	7439-89-6		
Magnesium, Dissolved	41.0	mg/L	0.050	0.011	1	11/01/19 18:00	11/03/19 12:15	7439-95-4		
Manganese, Dissolved	4.3	mg/L	0.040	0.0061	1	11/01/19 18:00	11/03/19 12:15	7439-96-5		
Potassium, Dissolved	10.1	mg/L	0.20	0.026	1	11/01/19 18:00	11/03/19 12:15	7440-09-7		
Sodium, Dissolved	32.7	mg/L	10.0	1.9	10	11/01/19 18:00	11/04/19 15:20	7440-23-5		
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	0.00034J	mg/L	0.0030	0.00027	1	10/28/19 20:04	10/29/19 21:34	7440-36-0	B	
Arsenic	1.9	mg/L	0.0050	0.00035	1	10/28/19 20:04	10/29/19 21:34	7440-38-2		
Barium	0.13	mg/L	0.010	0.00049	1	10/28/19 20:04	10/29/19 21:34	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/28/19 20:04	10/29/19 21:34	7440-41-7		
Boron	2.1	mg/L	0.040	0.0049	1	10/28/19 20:04	10/29/19 21:34	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/28/19 20:04	10/29/19 21:34	7440-43-9		
Calcium	151	mg/L	5.0	0.55	50	10/28/19 20:04	10/29/19 21:39	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/28/19 20:04	10/29/19 21:34	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/28/19 20:04	10/29/19 21:34	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	10/28/19 20:04	10/29/19 21:34	7439-92-1		
Lithium	0.13	mg/L	0.030	0.00078	1	10/28/19 20:04	10/29/19 21:34	7439-93-2		
Molybdenum	0.050	mg/L	0.010	0.00095	1	10/28/19 20:04	10/29/19 21:34	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/28/19 20:04	10/29/19 21:34	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/28/19 20:04	10/29/19 21:34	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00027	1	11/03/19 15:41	11/04/19 20:45	7440-36-0		
Arsenic, Dissolved	0.24	mg/L	0.0050	0.00035	1	11/03/19 15:41	11/04/19 20:45	7440-38-2		
Barium, Dissolved	0.078	mg/L	0.010	0.00049	1	11/03/19 15:41	11/04/19 20:45	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:17	7440-41-7		
Boron, Dissolved	2.4	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:17	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 20:45	7440-43-9		
Calcium, Dissolved	150	mg/L	5.0	0.55	50	11/03/19 15:41	11/04/19 20:51	7440-70-2		
Chromium, Dissolved	ND	mg/L	0.010	0.00039	1	11/03/19 15:41	11/04/19 20:45	7440-47-3		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 20:45	7440-48-4		
Lead, Dissolved	ND	mg/L	0.0050	0.000046	1	11/03/19 15:41	11/04/19 20:45	7439-92-1		
Lithium, Dissolved	0.15	mg/L	0.030	0.00078	1	11/03/19 15:41	11/05/19 13:17	7439-93-2		
Molybdenum, Dissolved	0.046	mg/L	0.010	0.00095	1	11/03/19 15:41	11/04/19 20:45	7439-98-7		
Selenium, Dissolved	ND	mg/L	0.010	0.0013	1	11/03/19 15:41	11/04/19 20:45	7782-49-2		
Thallium, Dissolved	ND	mg/L	0.0010	0.000052	1	11/03/19 15:41	11/04/19 20:45	7440-28-0		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch
 Pace Project No.: 2624659

Sample: IW-C-1 Lab ID: 2624659003 Collected: 10/21/19 16:41 Received: 10/23/19 00:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.00014	1	10/29/19 08:27	10/29/19 16:33	7439-97-6	
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	11/03/19 15:41	11/04/19 10:49	7439-97-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO ₃)	184	mg/L	20.0	20.0	1		10/28/19 14:56		
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	20.0	20.0	1		10/28/19 14:56		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	858	mg/L	10.0	10.0	1		10/25/19 14:58		
4500PE Ortho Phosphorus Analytical Method: SM 4500-P									
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/23/19 19:20		H1
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/24/19 07:24	14797-55-8	H1
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	8.8	mg/L	1.0	0.024	1		10/30/19 23:54	16887-00-6	
Fluoride	0.97	mg/L	0.30	0.029	1		10/30/19 23:54	16984-48-8	
Sulfate	473	mg/L	100	1.7	100		10/31/19 15:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 37641 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 170922 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	10/29/19 13:44	

LABORATORY CONTROL SAMPLE: 170923

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 170924 170925

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		2624794001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	mg/L		0.0025	0.0025	0.0026	0.0025	103	101	75-125	2	20		

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QUALITY CONTROL DATA

Project: Plant Branch

Pace Project No.: 2624659

QC Batch: 38080 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 173090 Matrix: Water

Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	0.00014	11/04/19 10:34	

LABORATORY CONTROL SAMPLE: 173091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	0.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 173092 173093

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624686012 Result	Spike Conc.	Spike Conc.	Conc.								
Mercury, Dissolved	mg/L	ND	0.0025	0.0025	0.0026	0.0025	105	99	75-125	6	20		

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 37765 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 171372 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.032	11/01/19 00:53	
Iron	mg/L	ND	0.040	0.015	11/01/19 00:53	
Magnesium	mg/L	ND	0.050	0.011	11/01/19 00:53	
Manganese	mg/L	ND	0.040	0.0061	11/01/19 00:53	
Potassium	mg/L	ND	0.20	0.026	11/01/19 00:53	
Sodium	mg/L	ND	1.0	0.19	11/01/19 00:53	

LABORATORY CONTROL SAMPLE: 171373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.0	101	80-120	
Iron	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	0.99	99	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171374 171375

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2623705001 Result	Spike Conc.	Spike Conc.	Conc.								
Aluminum	mg/L	ND	1	1	1.0	1.0	102	100	75-125	2	20		
Iron	mg/L	0.17	1	1	1.2	1.2	104	102	75-125	2	20		
Magnesium	mg/L	35.4	1	1	36.7	36.1	130	75	75-125	2	20	M1	
Manganese	mg/L	9.0	1	1	10.3	10.1	126	110	75-125	2	20	M1	
Potassium	mg/L	2.1	1	1	3.3	3.3	119	119	75-125	0	20		
Sodium	mg/L	13.1	1	1	14.3	14.1	125	100	75-125	2	20		

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 38053 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 172832 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	mg/L	ND	0.10	0.032	11/03/19 10:57	
Iron, Dissolved	mg/L	ND	0.040	0.015	11/03/19 10:57	
Magnesium, Dissolved	mg/L	ND	0.050	0.011	11/03/19 10:57	
Manganese, Dissolved	mg/L	ND	0.040	0.0061	11/03/19 10:57	
Potassium, Dissolved	mg/L	ND	0.20	0.026	11/03/19 10:57	
Sodium, Dissolved	mg/L	ND	1.0	0.19	11/03/19 10:57	

LABORATORY CONTROL SAMPLE: 172833

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	mg/L	1	1.0	102	80-120	
Iron, Dissolved	mg/L	1	1.1	106	80-120	
Magnesium, Dissolved	mg/L	1	1.0	103	80-120	
Manganese, Dissolved	mg/L	1	1.1	105	80-120	
Potassium, Dissolved	mg/L	1	0.97	97	80-120	
Sodium, Dissolved	mg/L	1	0.96J	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 173035 173036

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624678005 Result	Spike Conc.	Spike Conc.	Result						
Aluminum, Dissolved	mg/L	ND	1	1	1.1	1.0	106	100	75-125	6	20
Iron, Dissolved	mg/L	ND	1	1	1.1	1.0	110	104	75-125	6	20
Magnesium, Dissolved	mg/L	38.6	1	1	42.6	40.0	402	138	75-125	6	20 M1
Manganese, Dissolved	mg/L	ND	1	1	1.1	1.0	108	104	75-125	4	20
Potassium, Dissolved	mg/L	1.7	1	1	3.0	2.7	125	100	75-125	9	20
Sodium, Dissolved	mg/L	28.1	1	1	30.8	28.7	270	57	75-125	7	20 M1

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 37696 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 171182 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00029J	0.0030	0.00027	10/29/19 19:20	
Arsenic	mg/L	ND	0.0050	0.00035	10/29/19 19:20	
Barium	mg/L	ND	0.010	0.00049	10/29/19 19:20	
Beryllium	mg/L	ND	0.0030	0.000074	10/29/19 19:20	
Boron	mg/L	ND	0.040	0.0049	10/29/19 19:20	
Cadmium	mg/L	ND	0.0025	0.00011	10/29/19 19:20	
Calcium	mg/L	ND	0.10	0.011	10/29/19 19:20	
Chromium	mg/L	ND	0.010	0.00039	10/29/19 19:20	
Cobalt	mg/L	ND	0.0050	0.00030	10/29/19 19:20	
Lead	mg/L	ND	0.0050	0.000046	10/29/19 19:20	
Lithium	mg/L	ND	0.030	0.00078	10/29/19 19:20	
Molybdenum	mg/L	ND	0.010	0.00095	10/29/19 19:20	
Selenium	mg/L	ND	0.010	0.0013	10/29/19 19:20	
Thallium	mg/L	ND	0.0010	0.000052	10/29/19 19:20	

LABORATORY CONTROL SAMPLE: 171183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	113	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.10	103	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Calcium	mg/L	1	1.0	101	80-120	
Chromium	mg/L	0.1	0.11	107	80-120	
Cobalt	mg/L	0.1	0.11	106	80-120	
Lead	mg/L	0.1	0.11	106	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.11	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171184 171185

Parameter	Units	2624794002 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	0.11	111	112	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch

Pace Project No.: 2624659

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171184			171185			% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		2624794002	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Arsenic	mg/L	0.0046J	0.1	0.1	0.097	0.098	93	93	75-125	0	20			
Barium	mg/L	0.35	0.1	0.1	0.46	0.46	108	109	75-125	0	20			
Beryllium	mg/L	0.000078J	0.1	0.1	0.090	0.091	90	91	75-125	1	20			
Boron	mg/L	1.1	1	1	1.9	1.9	78	81	75-125	1	20			
Cadmium	mg/L		0.1	0.1	0.086	0.085	86	85	75-125	1	20			
Calcium	mg/L	260	1	1	269	272	841	1200	75-125	1	20			
Chromium	mg/L	0.0019J	0.1	0.1	0.11	0.11	104	103	75-125	1	20			
Cobalt	mg/L	ND	0.1	0.1	0.095	0.094	95	94	75-125	1	20			
Lead	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20			
Lithium	mg/L	0.096	0.1	0.1	0.20	0.20	101	102	75-125	0	20			
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	109	110	75-125	0	20			
Selenium	mg/L	0.0049J	0.1	0.1	0.051	0.048	46	43	75-125	5	20	M1		
Thallium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20			

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 38026 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 172898 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00027	11/04/19 17:03	
Arsenic, Dissolved	mg/L	0.00093J	0.0050	0.00035	11/04/19 17:03	
Barium, Dissolved	mg/L	ND	0.010	0.00049	11/04/19 17:03	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000074	11/04/19 17:03	
Boron, Dissolved	mg/L	ND	0.040	0.0049	11/04/19 17:03	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00011	11/04/19 17:03	
Calcium, Dissolved	mg/L	ND	0.10	0.011	11/04/19 17:03	
Chromium, Dissolved	mg/L	ND	0.010	0.00039	11/04/19 17:03	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00030	11/04/19 17:03	
Lead, Dissolved	mg/L	ND	0.0050	0.000046	11/04/19 17:03	
Lithium, Dissolved	mg/L	ND	0.030	0.00078	11/04/19 17:03	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00095	11/04/19 17:03	
Selenium, Dissolved	mg/L	ND	0.010	0.0013	11/04/19 17:03	
Thallium, Dissolved	mg/L	ND	0.0010	0.000052	11/04/19 17:03	

LABORATORY CONTROL SAMPLE: 172899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.10	101	80-120	
Arsenic, Dissolved	mg/L	0.1	0.10	100	80-120	
Barium, Dissolved	mg/L	0.1	0.097	97	80-120	
Beryllium, Dissolved	mg/L	0.1	0.10	104	80-120	
Boron, Dissolved	mg/L	1	1.0	101	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	100	80-120	
Calcium, Dissolved	mg/L	1	0.98	98	80-120	
Chromium, Dissolved	mg/L	0.1	0.10	103	80-120	
Cobalt, Dissolved	mg/L	0.1	0.10	100	80-120	
Lead, Dissolved	mg/L	0.1	0.091	91	80-120	
Lithium, Dissolved	mg/L	0.1	0.10	104	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.099	99	80-120	
Selenium, Dissolved	mg/L	0.1	0.10	101	80-120	
Thallium, Dissolved	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 172900 172901

Parameter	Units	2624635001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	104	100	75-125	4	20	

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QUALITY CONTROL DATA

Project: Plant Branch

Pace Project No.: 2624659

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 172900		172901		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624635001 Result	MS Spike Conc.	MSD Spike Conc.									
Arsenic, Dissolved	mg/L	0.0017J	0.1	0.1	0.10	0.11	101	106	75-125	5	20		
Barium, Dissolved	mg/L	0.035	0.1	0.1	0.14	0.13	101	93	75-125	6	20		
Beryllium, Dissolved	mg/L	0.00089J	0.1	0.1	0.098	0.094	97	93	75-125	4	20		
Boron, Dissolved	mg/L	0.93	1	1	1.9	1.8	99	84	75-125	8	20		
Cadmium, Dissolved	mg/L	0.00022J	0.1	0.1	0.10	0.10	102	100	75-125	3	20		
Calcium, Dissolved	mg/L	59.9	1	1	59.1	61.4	-76	154	75-125	4	20	M6	
Chromium, Dissolved	mg/L	0.010	0.1	0.1	0.11	0.11	101	101	75-125	0	20		
Cobalt, Dissolved	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20		
Lead, Dissolved	mg/L	ND	0.1	0.1	0.093	0.087	93	87	75-125	6	20		
Lithium, Dissolved	mg/L	0.0055J	0.1	0.1	0.10	0.098	97	92	75-125	4	20		
Molybdenum, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20		
Selenium, Dissolved	mg/L	0.032	0.1	0.1	0.13	0.14	101	105	75-125	3	20		
Thallium, Dissolved	mg/L	0.000057J	0.1	0.1	0.093	0.089	93	89	75-125	5	20		

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QUALITY CONTROL DATA

Project: Plant Branch

Pace Project No.: 2624659

QC Batch: 37448 Analysis Method: SM 4500-P
 QC Batch Method: SM 4500-P Analysis Description: 4500PE Ortho Phosphorus
 Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 169586 Matrix: Water

Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.020	10/23/19 19:12	

LABORATORY CONTROL SAMPLE: 169587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.54	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 169588 169589

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		2624659002 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Orthophosphate as P	mg/L	ND	0.5	0.5	0.54	0.54	108	108	80-120	1	10	H1	

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 37451 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 169595 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.050	0.0050	10/24/19 01:53	

LABORATORY CONTROL SAMPLE: 169596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 169821 169822

Parameter	Units	2624678003		169821		169822		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Nitrate as N	mg/L	ND	10	10	9.8	9.8	98	98	90-110	0	15 H1

MATRIX SPIKE SAMPLE: 169823

Parameter	Units	2624663002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L		2.3	10	11.1	88	90-110 M1

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2624659

QC Batch: 37858 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624659001, 2624659002, 2624659003

METHOD BLANK: 171795 Matrix: Water
Associated Lab Samples: 2624659001, 2624659002, 2624659003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.032J	1.0	0.024	10/30/19 20:37	
Fluoride	mg/L	ND	0.30	0.029	10/30/19 20:37	
Sulfate	mg/L	0.36J	1.0	0.017	10/30/19 20:37	

LABORATORY CONTROL SAMPLE: 171796

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.7	107	90-110	
Fluoride	mg/L	10	10.9	109	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171797 171798

Parameter	Units	2624403001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	123	100	100	328	328	205	205	90-110	0	15	M6
Fluoride	mg/L	1.0	100	100	107	106	106	105	90-110	0	15	

MATRIX SPIKE SAMPLE: 171799

Parameter	Units	2624685004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	18.0	10	26.2	82	90-110	M1
Fluoride	mg/L	0.20J	10	10.9	107	90-110	

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QUALIFIERS

Project: Plant Branch

Pace Project No.: 2624659

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.

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.

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.

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: Plant Branch
Pace Project No.: 2624659

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624659001	PZ-15S	EPA 3010A	37765	EPA 6010D	37960
2624659002	PZ-15I	EPA 3010A	37765	EPA 6010D	37960
2624659003	IW-C-1	EPA 3010A	37765	EPA 6010D	37960
2624659001	PZ-15S	EPA 3010A	38053	EPA 6010D	38066
2624659002	PZ-15I	EPA 3010A	38053	EPA 6010D	38066
2624659003	IW-C-1	EPA 3010A	38053	EPA 6010D	38066
2624659001	PZ-15S	EPA 3005A	37696	EPA 6020B	37751
2624659002	PZ-15I	EPA 3005A	37696	EPA 6020B	37751
2624659003	IW-C-1	EPA 3005A	37696	EPA 6020B	37751
2624659001	PZ-15S	EPA 3005A	38026	EPA 6020B	38086
2624659002	PZ-15I	EPA 3005A	38026	EPA 6020B	38086
2624659003	IW-C-1	EPA 3005A	38026	EPA 6020B	38086
2624659001	PZ-15S	EPA 7470A	37641	EPA 7470A	37746
2624659002	PZ-15I	EPA 7470A	37641	EPA 7470A	37746
2624659003	IW-C-1	EPA 7470A	37641	EPA 7470A	37746
2624659001	PZ-15S	EPA 7470A	38080	EPA 7470A	38085
2624659002	PZ-15I	EPA 7470A	38080	EPA 7470A	38085
2624659003	IW-C-1	EPA 7470A	38080	EPA 7470A	38085
2624659002	PZ-15I	SM 2320B	37659		
2624659003	IW-C-1	SM 2320B	37659		
2624659001	PZ-15S	SM 2320B	37728		
2624659001	PZ-15S	SM 2540C	37558		
2624659002	PZ-15I	SM 2540C	37558		
2624659003	IW-C-1	SM 2540C	37558		
2624659001	PZ-15S	SM 4500-P	37448		
2624659002	PZ-15I	SM 4500-P	37448		
2624659003	IW-C-1	SM 4500-P	37448		
2624659001	PZ-15S	EPA 300.0	37451		
2624659002	PZ-15I	EPA 300.0	37451		
2624659003	IW-C-1	EPA 300.0	37451		
2624659001	PZ-15S	EPA 300.0	37858		
2624659002	PZ-15I	EPA 300.0	37858		
2624659003	IW-C-1	EPA 300.0	37858		

REPORT OF LABORATORY ANALYSIS

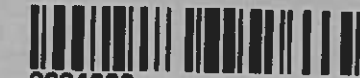
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WO#: 2624659



2624659

WO#: 2624660



2624660

CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY - Affix Workorder

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
 phone: (404) 506-7239
 Email: j.abraham@southernco.com

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

Project Name: Plant Branch Project # 166625418.022A
 Pace Profile#
 Pace Project Manager: betsy.mcdaniel@pace-labs.com
 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		Res Cl	# of Ctns	App III/IV metals & total metals-see comments	Dissolved Metals by 200.7 (Lab Filter)	Cations / Anions (phosphate lab filterect)	Radium 226.228	Chloride, Fluoride, Sulfate, TDS
			Date	Time	Date	Time							
PZ-15S	GW	G	10/21/2019	14:01			6	1	1	1	2	1	
PZ-15I	GW	G	10/21/2019	15:11			6	1	1	1	2	1	
IW-C-1	GW	G	10/21/2019	16:41			6	1	1	1	2	1	

(Total / Dissolved Metals): Al, B, Be, Cd, Co, Fe, Mn
 (Cations/Anions): Bicarbonate/Carbonate Alkalinity, Nitrate, Phosphate, Sodium, Magnesium, Potassium. (App III Metals): B, Ca, (App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl
 NOTE: Total Boron only required for single analysis (listed for both Total/Dissolved and App III Analysis)

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) *Ken Gold* Date/Time: 10-22-19 10:00
 Received by/Company: (Signature) *Ken Wood* Date/Time: 10/23/19 10:00

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: MTJL LAB USE ONLY
 Acctnum: #:
 Template:
 Prelogin:
 PM:
 PB:

Trip Blank Received: Y N NA
 HCL MeOH TSP Other

Non Conformance(s): Page 1
 YES / NO of: 2



Sample Condition Upon Receipt

Client Name: Georgia Power

WU# : 2624659

PM: BM Due Date: 10/30/19

CLIENT: GAPower-CCR

WU# : 2624660

PM: BM Due Date: 11/20/19

CLIENT: GAPower-CCR

Courier: [] Fed Ex [] UPS [] USPS [x] Client [] Commercial [] Pace Other Tracking #: _____

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

Packing Material: [x] Bubble Wrap [] Bubble Bags [] None [] Other

Thermometer Used 083

Type of Ice: Wet Blue None [] Samples on ice, cooling process has begun

Cooler Temperature 10.6

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: _____

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

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

3000 W28

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)

November 25, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

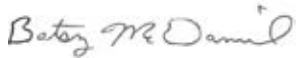
RE: Project: Plant Branch Rads
Pace Project No.: 2624660

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: Plant Branch Rads
Pace Project No.: 2624660

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Branch Rads

Pace Project No.: 2624660

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624660001	PZ-15S	Water	10/21/19 14:01	10/23/19 00:00
2624660002	PZ-15I	Water	10/21/19 15:11	10/23/19 00:00
2624660003	IW-C-1	Water	10/21/19 16:41	10/23/19 00:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Branch Rads

Pace Project No.: 2624660

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624660001	PZ-15S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624660002	PZ-15I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624660003	IW-C-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Rads

Pace Project No.: 2624660

Sample: **PZ-15S** Lab ID: **2624660001** Collected: 10/21/19 14:01 Received: 10/23/19 00:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.486 ± 0.292 (0.444) C:96% T:NA	pCi/L	11/15/19 07:34	13982-63-3	
Radium-228	EPA 9320	0.274 ± 0.346 (0.733) C:81% T:81%	pCi/L	11/12/19 15:57	15262-20-1	
Total Radium	Total Radium Calculation	0.760 ± 0.638 (1.18)	pCi/L	11/18/19 15:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Rads

Pace Project No.: 2624660

Sample: PZ-15I **Lab ID: 2624660002** Collected: 10/21/19 15:11 Received: 10/23/19 00:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.00 ± 0.410 (0.503) C:95% T:NA	pCi/L	11/15/19 07:34	13982-63-3	
Radium-228	EPA 9320	3.61 ± 0.898 (0.796) C:78% T:79%	pCi/L	11/12/19 15:56	15262-20-1	
Total Radium	Total Radium Calculation	4.61 ± 1.31 (1.30)	pCi/L	11/18/19 15:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Rads

Pace Project No.: 2624660

Sample: **IW-C-1** Lab ID: **2624660003** Collected: 10/21/19 16:41 Received: 10/23/19 00:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.461 ± 0.288 (0.442) C:93% T:NA	pCi/L	11/15/19 07:34	13982-63-3	
Radium-228	EPA 9320	0.0873 ± 0.386 (0.879) C:71% T:82%	pCi/L	11/12/19 15:56	15262-20-1	
Total Radium	Total Radium Calculation	0.548 ± 0.674 (1.32)	pCi/L	11/18/19 15:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Rads

Pace Project No.: 2624660

QC Batch: 369310 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 2624660001, 2624660002, 2624660003

METHOD BLANK: 1791698 Matrix: Water
 Associated Lab Samples: 2624660001, 2624660002, 2624660003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.590 ± 0.307 (0.405) C:93% T:NA	pCi/L	11/15/19 07:34	

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: Plant Branch Rads

Pace Project No.: 2624660

QC Batch:	369311	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	2624660001, 2624660002, 2624660003		

METHOD BLANK:	1791699	Matrix:	Water
Associated Lab Samples:	2624660001, 2624660002, 2624660003		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.174 ± 0.362 (0.799) C:80% T:87%	pCi/L	11/12/19 15:54	

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 Rads
Pace Project No.: 2624660

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.

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.

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.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Rads

Pace Project No.: 2624660

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624660001	PZ-15S	EPA 9315	369310		
2624660002	PZ-15I	EPA 9315	369310		
2624660003	IW-C-1	EPA 9315	369310		
2624660001	PZ-15S	EPA 9320	369311		
2624660002	PZ-15I	EPA 9320	369311		
2624660003	IW-C-1	EPA 9320	369311		
2624660001	PZ-15S	Total Radium Calculation	371529		
2624660002	PZ-15I	Total Radium Calculation	371529		
2624660003	IW-C-1	Total Radium Calculation	371529		

REPORT OF LABORATORY ANALYSIS

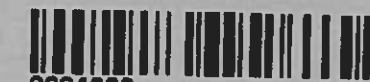
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WO#: 2624659



2624659

WO#: 2624660



2624660

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
 phone: (404) 506-7239
 Email: j.abraham@southernco.com

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

Project Name: Plant Branch Project # Pace Profile#
 166625418.022A
 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:
 betsy.mcdaniel@pace-labs.com
 Immediately Packed on Ice:
 Yes No
 Field Filtered (if applicable):
 Yes No
 Analysis: _____

LAB USE ONLY - Affix Workorder

ALL SHADE

Container Preservative Type
 1

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) ammonium hydroxide, (D) TSP, (U) Unpreserved

Analyses

App III/IV metals & total metals-see comments	Dissolved Metals by 200.7 (Lab Filter)	Cations / Anions (phosphate lab filterect)	Radium 226.228	Chloride, Fluoride, Sulfate, TDS
1	1	1	2	1
1	1	1	2	1
1	1	1	2	1

* 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		Res Cl	# of Ctns
			Date	Time	Date	Time		
PZ-15S	GW	G	10/21/2019	14:01			6	
PZ-15I	GW	G	10/21/2019	15:11			6	
IW-C-1	GW	G	10/21/2019	16:41			6	

(Total / Dissolved Metals): Al, B, Be, Cd, Co, Fe, Mn
 (Cations/Anions): Bicarbonate/Carbonate Alkalinity, Nitrate, Phosphate, Sodium, Magnesium, Potassium. (App III Metals): B, Ca, (App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl
 NOTE: Total Boron only required for single analysis (listed for both Total/Dissolved and App III Analysis)

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) *Ken Gold* Date/Time: 10-22-19 10:00
 Received by/Company: (Signature) *Ken Wood*

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

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

MTJL LAB USE ONLY

Date/Time: 10/23/19 Acctnum: _____
 Date/Time: _____ Template: _____
 Date/Time: _____ Prelogin: _____
 Date/Time: _____ PM: _____
 Date/Time: _____ PB: _____

Trip Blank Received: Y N NA
 HCL MeOH TSP Other

Non Conformance(s): Page 1
 YES / NO of: 2



Sample Condition Upon Receipt

Client Name: Georgia Power

WU# : 2624659

PM: BM Due Date: 10/30/19

CLIENT: GAPower-CCR

WU# : 2624660

PM: BM Due Date: 11/20/19

CLIENT: GAPower-CCR

Courier: [] Fed Ex [] UPS [] USPS [x] Client [] Commercial [] Pace Other Tracking #: _____

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

Packing Material: [x] Bubble Wrap [] Bubble Bags [] None [] Other

Thermometer Used 083

Type of Ice: Wet Blue None [] Samples on ice, cooling process has begun

Cooler Temperature 10.6

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: _____

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

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

3000 W28

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)

November 20, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

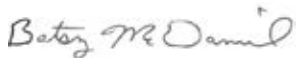
RE: Project: PLANT BRANCH
Pace Project No.: 2624770

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BRANCH

Pace Project No.: 2624770

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BRANCH

Pace Project No.: 2624770

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624770001	PZ-13S	Water	10/22/19 09:45	10/23/19 08:05
2624770002	PZ-14I	Water	10/22/19 11:20	10/23/19 08:05
2624770003	PZ-14S	Water	10/22/19 12:50	10/23/19 08:05
2624770004	IW-C-2	Water	10/22/19 09:51	10/23/19 08:05
2624770005	IW-D-2	Water	10/22/19 11:43	10/23/19 08:05
2624770006	IW-E-1	Water	10/22/19 13:55	10/23/19 08:05
2624770007	IW-B-2	Water	10/22/19 15:50	10/23/19 08:05
2624770008	PB-4D	Water	10/22/19 15:20	10/23/19 08:05
2624770009	EB-4	Water	10/22/19 16:40	10/23/19 08:05
2624770010	FB-4	Water	10/22/19 16:30	10/23/19 08:05
2624770011	DUP-4	Water	10/22/19 00:00	10/23/19 08:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BRANCH

Pace Project No.: 2624770

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624770001	PZ-13S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770002	PZ-14I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770003	PZ-14S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770004	IW-C-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770005	IW-D-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770006	IW-E-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770007	IW-B-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770008	PB-4D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770009	EB-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770010	FB-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624770011	DUP-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **PZ-13S** Lab ID: **2624770001** Collected: 10/22/19 09:45 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.549 ± 0.326 (0.515) C:87% T:NA	pCi/L	11/15/19 10:17	13982-63-3	
Radium-228	EPA 9320	0.0815 ± 0.381 (0.863) C:87% T:76%	pCi/L	11/12/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	0.631 ± 0.707 (1.38)	pCi/L	11/18/19 14:56	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **PZ-14I** Lab ID: **2624770002** Collected: 10/22/19 11:20 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.925 ± 0.395 (0.446) C:82% T:NA	pCi/L	11/15/19 10:17	13982-63-3	
Radium-228	EPA 9320	0.915 ± 0.498 (0.898) C:79% T:79%	pCi/L	11/12/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	1.84 ± 0.893 (1.34)	pCi/L	11/18/19 14:56	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **PZ-14S** Lab ID: **2624770003** Collected: 10/22/19 12:50 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.469 ± 0.268 (0.359) C:92% T:NA	pCi/L	11/15/19 10:17	13982-63-3	
Radium-228	EPA 9320	-0.0580 ± 0.332 (0.784) C:86% T:82%	pCi/L	11/12/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	0.469 ± 0.600 (1.14)	pCi/L	11/18/19 14:56	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: IW-C-2 **Lab ID: 2624770004** Collected: 10/22/19 09:51 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.250 ± 0.263 (0.528) C:93% T:NA	pCi/L	11/15/19 07:33	13982-63-3	
Radium-228	EPA 9320	0.717 ± 0.505 (0.997) C:84% T:81%	pCi/L	11/12/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	0.967 ± 0.768 (1.53)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **IW-D-2** Lab ID: **2624770005** Collected: 10/22/19 11:43 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.572 ± 0.338 (0.534) C:90% T:NA	pCi/L	11/15/19 07:33	13982-63-3	
Radium-228	EPA 9320	0.289 ± 0.363 (0.769) C:78% T:89%	pCi/L	11/12/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	0.861 ± 0.701 (1.30)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: IW-E-1 **Lab ID:** 2624770006 Collected: 10/22/19 13:55 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.575 ± 0.325 (0.479) C:94% T:NA	pCi/L	11/15/19 07:33	13982-63-3	
Radium-228	EPA 9320	-0.0566 ± 0.377 (0.887) C:82% T:77%	pCi/L	11/12/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	0.575 ± 0.702 (1.37)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **IW-B-2** Lab ID: **2624770007** Collected: 10/22/19 15:50 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.718 ± 0.374 (0.565) C:93% T:NA	pCi/L	11/15/19 07:33	13982-63-3	
Radium-228	EPA 9320	0.515 ± 0.360 (0.694) C:85% T:83%	pCi/L	11/12/19 15:52	15262-20-1	
Total Radium	Total Radium Calculation	1.23 ± 0.734 (1.26)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: PB-4D **Lab ID: 2624770008** Collected: 10/22/19 15:20 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.476 ± 0.304 (0.483) C:89% T:NA	pCi/L	11/15/19 07:33	13982-63-3	
Radium-228	EPA 9320	0.0938 ± 0.312 (0.705) C:83% T:86%	pCi/L	11/12/19 15:52	15262-20-1	
Total Radium	Total Radium Calculation	0.570 ± 0.616 (1.19)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **EB-4** Lab ID: **2624770009** Collected: 10/22/19 16:40 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.278 ± 0.232 (0.404) C:87% T:NA	pCi/L	11/15/19 10:17	13982-63-3	
Radium-228	EPA 9320	-0.177 ± 0.369 (0.885) C:80% T:86%	pCi/L	11/12/19 15:52	15262-20-1	
Total Radium	Total Radium Calculation	0.278 ± 0.601 (1.29)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: FB-4 **Lab ID: 2624770010** Collected: 10/22/19 16:30 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.493 ± 0.211 (0.194) C:90% T:NA	pCi/L	11/18/19 10:54	13982-63-3	
Radium-228	EPA 9320	0.200 ± 0.379 (0.831) C:82% T:86%	pCi/L	11/12/19 15:50	15262-20-1	
Total Radium	Total Radium Calculation	0.693 ± 0.590 (1.03)	pCi/L	11/18/19 15:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

Sample: **DUP-4** Lab ID: **2624770011** Collected: 10/22/19 00:00 Received: 10/23/19 08:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.466 ± 0.280 (0.387) C:93% T:NA	pCi/L	11/15/19 07:33	13982-63-3	
Radium-228	EPA 9320	0.803 ± 0.445 (0.813) C:82% T:82%	pCi/L	11/12/19 15:50	15262-20-1	
Total Radium	Total Radium Calculation	1.27 ± 0.725 (1.20)	pCi/L	11/18/19 15:16	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: PLANT BRANCH

Pace Project No.: 2624770

QC Batch:	369306	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	2624770001, 2624770002, 2624770003, 2624770004, 2624770005, 2624770006, 2624770007, 2624770008, 2624770009, 2624770010, 2624770011		

METHOD BLANK:	1791694	Matrix:	Water
Associated Lab Samples:	2624770001, 2624770002, 2624770003, 2624770004, 2624770005, 2624770006, 2624770007, 2624770008, 2624770009, 2624770010, 2624770011		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.317 ± 0.325 (0.673) C:79% T:91%	pCi/L	11/12/19 12:14	

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: PLANT BRANCH

Pace Project No.: 2624770

QC Batch:	369307	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	2624770001, 2624770002, 2624770003, 2624770004, 2624770005, 2624770006, 2624770007, 2624770008, 2624770009, 2624770010, 2624770011		

METHOD BLANK:	1791695	Matrix:	Water
Associated Lab Samples:	2624770001, 2624770002, 2624770003, 2624770004, 2624770005, 2624770006, 2624770007, 2624770008, 2624770009, 2624770010, 2624770011		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.330 ± 0.234 (0.359) C:92% T:NA	pCi/L	11/15/19 08:32	

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: PLANT BRANCH
Pace Project No.: 2624770

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.

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.

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.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

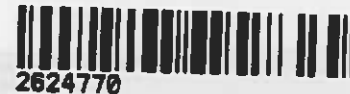
Project: PLANT BRANCH
Pace Project No.: 2624770

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624770001	PZ-13S	EPA 9315	369307		
2624770002	PZ-14I	EPA 9315	369307		
2624770003	PZ-14S	EPA 9315	369307		
2624770004	IW-C-2	EPA 9315	369307		
2624770005	IW-D-2	EPA 9315	369307		
2624770006	IW-E-1	EPA 9315	369307		
2624770007	IW-B-2	EPA 9315	369307		
2624770008	PB-4D	EPA 9315	369307		
2624770009	EB-4	EPA 9315	369307		
2624770010	FB-4	EPA 9315	369307		
2624770011	DUP-4	EPA 9315	369307		
2624770001	PZ-13S	EPA 9320	369306		
2624770002	PZ-14I	EPA 9320	369306		
2624770003	PZ-14S	EPA 9320	369306		
2624770004	IW-C-2	EPA 9320	369306		
2624770005	IW-D-2	EPA 9320	369306		
2624770006	IW-E-1	EPA 9320	369306		
2624770007	IW-B-2	EPA 9320	369306		
2624770008	PB-4D	EPA 9320	369306		
2624770009	EB-4	EPA 9320	369306		
2624770010	FB-4	EPA 9320	369306		
2624770011	DUP-4	EPA 9320	369306		
2624770001	PZ-13S	Total Radium Calculation	371524		
2624770002	PZ-14I	Total Radium Calculation	371524		
2624770003	PZ-14S	Total Radium Calculation	371524		
2624770004	IW-C-2	Total Radium Calculation	371529		
2624770005	IW-D-2	Total Radium Calculation	371529		
2624770006	IW-E-1	Total Radium Calculation	371529		
2624770007	IW-B-2	Total Radium Calculation	371529		
2624770008	PB-4D	Total Radium Calculation	371529		
2624770009	EB-4	Total Radium Calculation	371529		
2624770010	FB-4	Total Radium Calculation	371529		
2624770011	DUP-4	Total Radium Calculation	371529		

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WO#: 2624770



Pace Analytical
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
 phone: (404) 506-7239
 Email: jabraham@southernco.com
 Project Name: Plant Branch
 Project #: 166625418.022A
 Collected By (print): Travis Martinez
 Devin Thomas
 Collected By (Signature): *[Signature]*
 Turnaround Date Required:
 Rush:
 Same Day Next Day
 2 Day 3 Day 4 Day 5 Day
 (Expedite Charges Apply)

LAB USE ONLY- Affix Workorder/Login L
 MTJL Log-1
 2624770

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type **
 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

Lab Project Manager:
 Analyses
 App III/IV metals & total metals-see comments
 Dissolved Metals by 200.7 (Lab Filter)
 Cations / Anions (phosphate lab filtered)
 Radium 226.228
 Chloride, Fluoride, Sulfate, TDS
 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
 CI 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 (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		Res Cl	# of Ctns	App III/IV metals & total metals-see comments	Dissolved Metals by 200.7 (Lab Filter)	Cations / Anions (phosphate lab filtered)	Radium 226.228	Chloride, Fluoride, Sulfate, TDS
			Date	Time	Date	Time							
PZ-13S	GW	G	10/22/2019	9:45				6	1	1	1	2	1
PZ-14I	GW	G	10/22/2019	11:20				6	1	1	1	2	1
PZ-14S	GW	G	10/22/2019	12:50				6	1	1	1	2	1
IW-C-2	GW	G	10/22/2019	9:51				6	1	1	1	2	1
IW-D-1	GW	G	--	--									
IW-D-2	GW	G	10/22/2019	11:43				8	1	1	1	4	1
IW-E-1	GW	G	10/22/2019	13:55				6	1	1	1	2	1
IW-B-2	GW	G	10/22/2019	15:50				6	1	1	1	2	1
PB-4D	GW	G	10/22/2019	15:20				6	1	1	1	2	1
EB-4	W	G	10/22/2019	16:40				6	1	1	1	2	1
FB-4	W	G	10/22/2019	16:30				6	1	1	1	2	1
DUP-4	GW	G	10/22/2019	--				6	1	1	1	2	1

DRY WELL - NOT SAMPLED
 RAD-4

(Total / Dissolved Metals): Al, B, Be, Cd, Co, Fe, Mn
 (Cations/Anions): Bicarbonate/Carbonate Alkalinity, Nitrate, Phosphate, Sodium, Magnesium, Potassium. (App III Metals): B, Ca, (App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl
 NOTE: Total Boron only required for single analysis (listed for both Total/Dissolved and App III Analysis)

Type of Ice Used: Wet Blue Dry None
 SHDRT HOLDS PRESENT (<72 hours): Y N N/A
 Packing Material Used:
 Radchem sample(s) screened (<500 cpm): Y N NA
 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: 34
 Cooler 1 Therm Corr. Factor: 0C
 Cooler 1 Corrected Temp: 0C
 Comments:

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 10-23-14 / 0805 Received by/Company: (Signature) *[Signature]* Date/Time: 10/23/14
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: MTJL LAB USE ONLY
 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): Page: 1
 YES / NO of: 1



Client 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 34 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: _____

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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 checked="" 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>GW/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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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: _____

3000 W28

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)

December 17, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: PLANT BRANCH
Pace Project No.: 2624772

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BRANCH

Pace Project No.: 2624772

Pace Analytical Services Atlanta

110 Technology Parkway 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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SAMPLE SUMMARY

Project: PLANT BRANCH

Pace Project No.: 2624772

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624772001	PZ-13S	Water	10/22/19 09:45	10/23/19 08:05
2624772002	PZ-14I	Water	10/22/19 11:20	10/23/19 08:05
2624772003	PZ-14S	Water	10/22/19 12:50	10/23/19 08:05
2624772004	IW-C-2	Water	10/22/19 09:51	10/23/19 08:05
2624772005	IW-D-2	Water	10/22/19 11:43	10/23/19 08:05
2624772006	IW-E-1	Water	10/22/19 13:55	10/23/19 08:05
2624772007	IW-B-2	Water	10/22/19 15:50	10/23/19 08:05
2624772008	PB-4D	Water	10/22/19 15:20	10/23/19 08:05
2624772009	EB-4	Water	10/22/19 16:40	10/23/19 08:05
2624772010	FB-4	Water	10/22/19 16:30	10/23/19 08:05
2624772011	DUP-4	Water	10/22/19 00:00	10/23/19 08:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT BRANCH

Pace Project No.: 2624772

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624772001	PZ-13S	EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
2624772002	PZ-14I	EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
2624772003	PZ-14S	EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
2624772004	IW-C-2	EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
2624772005	IW-D-2	EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
2624772006	IW-E-1	EPA 6020B	CSW	20
		EPA 6020B	CSW	7

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SAMPLE ANALYTE COUNT

Project: PLANT BRANCH

Pace Project No.: 2624772

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624772007	IW-B-2	SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
2624772008	PB-4D	EPA 300.0	MWB	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	20
2624772009	EB-4	EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
2624772010	FB-4	SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3
2624772011	DUP-4	EPA 6020B	CSW	20
		EPA 6020B	CSW	7
		SM 2320B	S1A	3
		SM 2540C	MZP	1

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SAMPLE ANALYTE COUNT

Project: PLANT BRANCH

Pace Project No.: 2624772

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 4500-P	JAD	1
		EPA 300.0	MWB	1
		EPA 300.0	MWB	3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: PZ-13S		Lab ID: 2624772001		Collected: 10/22/19 09:45		Received: 10/23/19 08:05		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum	0.24	mg/L	0.10	0.0089	1	10/30/19 18:10	10/31/19 21:27	7429-90-5		
Antimony	ND	mg/L	0.0030	0.00027	1	10/30/19 18:10	10/31/19 21:27	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/30/19 18:10	10/31/19 21:27	7440-38-2		
Barium	0.077	mg/L	0.010	0.00049	1	10/30/19 18:10	10/31/19 21:27	7440-39-3		
Beryllium	0.00040J	mg/L	0.0030	0.000074	1	10/30/19 18:10	11/01/19 17:05	7440-41-7		
Boron	0.0098J	mg/L	0.040	0.0049	1	10/30/19 18:10	11/01/19 17:05	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/30/19 18:10	10/31/19 21:27	7440-43-9		
Calcium	14.8	mg/L	5.0	0.55	50	10/30/19 18:10	10/31/19 21:33	7440-70-2		
Chromium	0.020	mg/L	0.010	0.00039	1	10/30/19 18:10	10/31/19 21:27	7440-47-3		
Cobalt	0.00037J	mg/L	0.0050	0.00030	1	10/30/19 18:10	10/31/19 21:27	7440-48-4		
Iron	0.30	mg/L	0.040	0.0097	1	10/30/19 18:10	10/31/19 21:27	7439-89-6		
Lead	0.00035J	mg/L	0.0050	0.000046	1	10/30/19 18:10	10/31/19 21:27	7439-92-1		
Lithium	0.0010J	mg/L	0.030	0.00078	1	10/30/19 18:10	10/31/19 21:27	7439-93-2		
Magnesium	8.0	mg/L	0.050	0.0030	1	10/30/19 18:10	10/31/19 21:27	7439-95-4		
Manganese	0.039	mg/L	0.010	0.00057	1	10/30/19 18:10	10/31/19 21:27	7439-96-5		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/30/19 18:10	10/31/19 21:27	7439-98-7		
Potassium	4.4	mg/L	0.10	0.026	1	10/30/19 18:10	10/31/19 21:27	7440-09-7		
Selenium	0.0033J	mg/L	0.010	0.0013	1	10/30/19 18:10	10/31/19 21:27	7782-49-2		
Sodium	18.9	mg/L	0.10	0.015	1	10/30/19 18:10	11/01/19 17:05	7440-23-5		
Thallium	ND	mg/L	0.0010	0.000052	1	10/30/19 18:10	10/31/19 21:27	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 20:57	7429-90-5		
Beryllium, Dissolved	0.00030J	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:23	7440-41-7		
Boron, Dissolved	0.0081J	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:23	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 20:57	7440-43-9		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 20:57	7440-48-4		
Iron, Dissolved	ND	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 20:57	7439-89-6		
Manganese, Dissolved	0.027	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 20:57	7439-96-5		
2320B Alkalinity Low Level		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	16.0	mg/L	1.0	1.0	1		11/01/19 12:08			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		11/01/19 12:08			
Alkalinity, Total as CaCO3	16.0	mg/L	1.0	1.0	1		11/01/19 12:08			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	203	mg/L	10.0	10.0	1		10/29/19 13:01			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	0.061	mg/L	0.020	0.020	1		10/30/19 20:51		H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	0.016J	mg/L	0.050	0.0050	1		10/29/19 05:23	14797-55-8	H1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: PZ-13S		Lab ID: 2624772001		Collected: 10/22/19 09:45	Received: 10/23/19 08:05	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	2.1	mg/L	1.0	0.024	1		10/30/19 13:48	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/19 13:48	16984-48-8	
Sulfate	93.2	mg/L	10.0	0.17	10		10/30/19 20:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: PZ-14I		Lab ID: 2624772002		Collected: 10/22/19 11:20		Received: 10/23/19 08:05		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum	0.062J	mg/L	0.10	0.0089	1	10/30/19 18:10	10/31/19 21:39	7429-90-5		
Antimony	0.028	mg/L	0.0030	0.00027	1	10/30/19 18:10	10/31/19 21:39	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/30/19 18:10	10/31/19 21:39	7440-38-2		
Barium	0.040	mg/L	0.010	0.00049	1	10/30/19 18:10	10/31/19 21:39	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/30/19 18:10	11/01/19 17:11	7440-41-7		
Boron	0.20	mg/L	0.040	0.0049	1	10/30/19 18:10	11/01/19 17:11	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/30/19 18:10	10/31/19 21:39	7440-43-9		
Calcium	39.2	mg/L	5.0	0.55	50	10/30/19 18:10	10/31/19 21:45	7440-70-2		
Chromium	0.0018J	mg/L	0.010	0.00039	1	10/30/19 18:10	10/31/19 21:39	7440-47-3		
Cobalt	0.00030J	mg/L	0.0050	0.00030	1	10/30/19 18:10	10/31/19 21:39	7440-48-4		
Iron	0.28	mg/L	0.040	0.0097	1	10/30/19 18:10	10/31/19 21:39	7439-89-6		
Lead	0.00015J	mg/L	0.0050	0.000046	1	10/30/19 18:10	10/31/19 21:39	7439-92-1		
Lithium	0.023J	mg/L	0.030	0.00078	1	10/30/19 18:10	10/31/19 21:39	7439-93-2		
Magnesium	5.8	mg/L	0.050	0.0030	1	10/30/19 18:10	10/31/19 21:39	7439-95-4		
Manganese	0.37	mg/L	0.010	0.00057	1	10/30/19 18:10	10/31/19 21:39	7439-96-5		
Molybdenum	0.091	mg/L	0.010	0.00095	1	10/30/19 18:10	10/31/19 21:39	7439-98-7		
Potassium	35.3	mg/L	5.0	1.3	50	10/30/19 18:10	10/31/19 21:45	7440-09-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/30/19 18:10	10/31/19 21:39	7782-49-2		
Sodium	110	mg/L	5.0	0.75	50	10/30/19 18:10	10/31/19 21:45	7440-23-5		
Thallium	ND	mg/L	0.0010	0.000052	1	10/30/19 18:10	10/31/19 21:39	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 21:02	7429-90-5		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:29	7440-41-7		
Boron, Dissolved	0.18	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:29	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 21:02	7440-43-9		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 21:02	7440-48-4		
Iron, Dissolved	ND	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 21:02	7439-89-6		
Manganese, Dissolved	0.0038J	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 21:02	7439-96-5		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity, Bicarbonate (CaCO ₃)	190	mg/L	20.0	20.0	1		10/29/19 18:04			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	20.0	1		10/29/19 18:04			
Alkalinity, Total as CaCO ₃	190	mg/L	20.0	20.0	1		10/29/19 18:04			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	486	mg/L	10.0	10.0	1		10/29/19 13:01			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 20:53		H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	0.046J	mg/L	0.050	0.0050	1		10/29/19 06:04	14797-55-8	H1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: PZ-14I		Lab ID: 2624772002		Collected: 10/22/19 11:20		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	12.2	mg/L	1.0	0.024	1		10/30/19 14:54	16887-00-6	
Fluoride	1.3	mg/L	0.30	0.029	1		10/30/19 14:54	16984-48-8	
Sulfate	133	mg/L	20.0	0.34	20		10/31/19 22:03	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: PZ-14S		Lab ID: 2624772003		Collected: 10/22/19 12:50		Received: 10/23/19 08:05		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum	ND	mg/L	0.10	0.0089	1	10/30/19 18:10	10/31/19 21:50	7429-90-5		
Antimony	ND	mg/L	0.0030	0.00027	1	10/30/19 18:10	10/31/19 21:50	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/30/19 18:10	10/31/19 21:50	7440-38-2		
Barium	0.026	mg/L	0.010	0.00049	1	10/30/19 18:10	10/31/19 21:50	7440-39-3		
Beryllium	0.00062J	mg/L	0.0030	0.000074	1	10/30/19 18:10	11/01/19 17:16	7440-41-7		
Boron	1.5	mg/L	0.040	0.0049	1	10/30/19 18:10	11/01/19 17:16	7440-42-8		
Cadmium	0.0011J	mg/L	0.0025	0.00011	1	10/30/19 18:10	10/31/19 21:50	7440-43-9		
Calcium	58.3	mg/L	5.0	0.55	50	10/30/19 18:10	10/31/19 21:56	7440-70-2		
Chromium	0.0012J	mg/L	0.010	0.00039	1	10/30/19 18:10	10/31/19 21:50	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/30/19 18:10	10/31/19 21:50	7440-48-4		
Iron	ND	mg/L	0.040	0.0097	1	10/30/19 18:10	10/31/19 21:50	7439-89-6		
Lead	0.000099J	mg/L	0.0050	0.000046	1	10/30/19 18:10	10/31/19 21:50	7439-92-1		
Lithium	0.0037J	mg/L	0.030	0.00078	1	10/30/19 18:10	10/31/19 21:50	7439-93-2		
Magnesium	4.6	mg/L	0.050	0.0030	1	10/30/19 18:10	10/31/19 21:50	7439-95-4		
Manganese	0.46	mg/L	0.010	0.00057	1	10/30/19 18:10	10/31/19 21:50	7439-96-5		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/30/19 18:10	10/31/19 21:50	7439-98-7		
Potassium	7.3	mg/L	0.10	0.026	1	10/30/19 18:10	10/31/19 21:50	7440-09-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/30/19 18:10	10/31/19 21:50	7782-49-2		
Sodium	14.8	mg/L	0.10	0.015	1	10/30/19 18:10	11/01/19 17:16	7440-23-5		
Thallium	ND	mg/L	0.0010	0.000052	1	10/30/19 18:10	10/31/19 21:50	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 21:08	7429-90-5		
Beryllium, Dissolved	0.00060J	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:35	7440-41-7		
Boron, Dissolved	1.4	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:35	7440-42-8		
Cadmium, Dissolved	0.00095J	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 21:08	7440-43-9		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 21:08	7440-48-4		
Iron, Dissolved	ND	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 21:08	7439-89-6		
Manganese, Dissolved	0.41	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 21:08	7439-96-5		
2320B Alkalinity Low Level		Analytical Method: SM 2320B								
Alkalinity, Bicarbonate (CaCO ₃)	7.0	mg/L	1.0	1.0	1		11/01/19 12:14			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	1.0	1.0	1		11/01/19 12:14			
Alkalinity, Total as CaCO ₃	7.0	mg/L	1.0	1.0	1		11/01/19 12:14			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	307	mg/L	10.0	10.0	1		10/29/19 13:01			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 20:54		H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	0.0080J	mg/L	0.050	0.0050	1		10/29/19 07:06	14797-55-8	H1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: PZ-14S		Lab ID: 2624772003		Collected: 10/22/19 12:50		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	5.7	mg/L	1.0	0.024	1		10/30/19 15:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/19 15:16	16984-48-8	
Sulfate	170	mg/L	20.0	0.34	20		10/31/19 22:26	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: IW-C-2		Lab ID: 2624772004		Collected: 10/22/19 09:51		Received: 10/23/19 08:05		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum	0.014J	mg/L	0.10	0.0089	1	10/30/19 18:10	10/31/19 22:13	7429-90-5		
Antimony	0.0037	mg/L	0.0030	0.00027	1	10/30/19 18:10	10/31/19 22:13	7440-36-0		
Arsenic	0.059	mg/L	0.0050	0.00035	1	10/30/19 18:10	10/31/19 22:13	7440-38-2		
Barium	0.10	mg/L	0.010	0.00049	1	10/30/19 18:10	10/31/19 22:13	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/30/19 18:10	10/31/19 22:13	7440-41-7		
Boron	1.0	mg/L	0.040	0.0049	1	10/30/19 18:10	11/01/19 17:34	7440-42-8		
Cadmium	0.00016J	mg/L	0.0025	0.00011	1	10/30/19 18:10	10/31/19 22:13	7440-43-9		
Calcium	71.4	mg/L	5.0	0.55	50	10/30/19 18:10	10/31/19 22:19	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/30/19 18:10	10/31/19 22:13	7440-47-3		
Cobalt	0.0038J	mg/L	0.0050	0.00030	1	10/30/19 18:10	10/31/19 22:13	7440-48-4		
Iron	1.8	mg/L	0.040	0.0097	1	10/30/19 18:10	10/31/19 22:13	7439-89-6		
Lead	ND	mg/L	0.0050	0.000046	1	10/30/19 18:10	10/31/19 22:13	7439-92-1		
Lithium	0.16	mg/L	0.030	0.00078	1	10/30/19 18:10	10/31/19 22:13	7439-93-2		
Magnesium	6.8	mg/L	0.050	0.0030	1	10/30/19 18:10	10/31/19 22:13	7439-95-4		
Manganese	0.34	mg/L	0.010	0.00057	1	10/30/19 18:10	10/31/19 22:13	7439-96-5		
Molybdenum	0.045	mg/L	0.010	0.00095	1	10/30/19 18:10	10/31/19 22:13	7439-98-7		
Potassium	11.7	mg/L	0.10	0.026	1	10/30/19 18:10	11/01/19 17:34	7440-09-7		
Selenium	0.035	mg/L	0.010	0.0013	1	10/30/19 18:10	10/31/19 22:13	7782-49-2		
Sodium	12.0	mg/L	0.10	0.015	1	10/30/19 18:10	11/01/19 17:34	7440-23-5		
Thallium	0.0021	mg/L	0.0010	0.000052	1	10/30/19 18:10	10/31/19 22:13	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 21:14	7429-90-5		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:40	7440-41-7		
Boron, Dissolved	1.0	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:40	7440-42-8		
Cadmium, Dissolved	0.00011J	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 21:14	7440-43-9		
Cobalt, Dissolved	0.0033J	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 21:14	7440-48-4		
Iron, Dissolved	ND	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 21:14	7439-89-6		
Manganese, Dissolved	0.32	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 21:14	7439-96-5		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	88.0	mg/L	20.0	20.0	1		10/29/19 18:13			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/29/19 18:13			
Alkalinity, Total as CaCO3	88.0	mg/L	20.0	20.0	1		10/29/19 18:13			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	361	mg/L	10.0	10.0	1		10/29/19 13:01			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	0.094	mg/L	0.020	0.020	1		10/30/19 20:55		H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 05:43	14797-55-8	H1	

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: IW-C-2		Lab ID: 2624772004		Collected: 10/22/19 09:51	Received: 10/23/19 08:05	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	4.1	mg/L	1.0	0.024	1		10/30/19 15:39	16887-00-6	
Fluoride	0.24J	mg/L	0.30	0.029	1		10/30/19 15:39	16984-48-8	
Sulfate	133	mg/L	20.0	0.34	20		10/31/19 22:48	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: IW-D-2		Lab ID: 2624772005		Collected: 10/22/19 11:43		Received: 10/23/19 08:05		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum	0.12	mg/L	0.10	0.0089	1	10/30/19 18:10	10/31/19 22:25	7429-90-5		
Antimony	0.00037J	mg/L	0.0030	0.00027	1	10/30/19 18:10	10/31/19 22:25	7440-36-0		
Arsenic	1.4	mg/L	0.025	0.0018	5	10/30/19 18:10	11/01/19 17:39	7440-38-2		
Barium	0.037	mg/L	0.010	0.00049	1	10/30/19 18:10	10/31/19 22:25	7440-39-3		
Beryllium	0.00020J	mg/L	0.0030	0.000074	1	10/30/19 18:10	10/31/19 22:25	7440-41-7		
Boron	3.0	mg/L	0.20	0.025	5	10/30/19 18:10	11/01/19 17:39	7440-42-8		
Cadmium	0.030	mg/L	0.0025	0.00011	1	10/30/19 18:10	10/31/19 22:25	7440-43-9		
Calcium	487	mg/L	5.0	0.55	50	10/30/19 18:10	10/31/19 22:30	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/30/19 18:10	10/31/19 22:25	7440-47-3		
Cobalt	0.0060	mg/L	0.0050	0.00030	1	10/30/19 18:10	10/31/19 22:25	7440-48-4		
Iron	305	mg/L	2.0	0.49	50	10/30/19 18:10	10/31/19 22:30	7439-89-6		
Lead	ND	mg/L	0.0050	0.000046	1	10/30/19 18:10	10/31/19 22:25	7439-92-1		
Lithium	1.7	mg/L	0.15	0.0039	5	10/30/19 18:10	11/01/19 17:39	7439-93-2		
Magnesium	112	mg/L	2.5	0.15	50	10/30/19 18:10	10/31/19 22:30	7439-95-4		
Manganese	14.8	mg/L	0.050	0.0029	5	10/30/19 18:10	11/01/19 17:39	7439-96-5		
Molybdenum	0.039	mg/L	0.010	0.00095	1	10/30/19 18:10	10/31/19 22:25	7439-98-7		
Potassium	76.6	mg/L	0.50	0.13	5	10/30/19 18:10	11/01/19 17:39	7440-09-7		
Selenium	ND	mg/L	0.050	0.0063	5	10/30/19 18:10	11/01/19 17:39	7782-49-2	D3	
Sodium	26.3	mg/L	0.50	0.075	5	10/30/19 18:10	11/01/19 17:39	7440-23-5		
Thallium	0.00052J	mg/L	0.0010	0.000052	1	10/30/19 18:10	10/31/19 22:25	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum, Dissolved	0.035J	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 21:19	7429-90-5		
Beryllium, Dissolved	0.00017J	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:46	7440-41-7		
Boron, Dissolved	2.7	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:46	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 21:19	7440-43-9		
Cobalt, Dissolved	0.0059	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 21:19	7440-48-4		
Iron, Dissolved	250	mg/L	10.0	2.4	250	11/03/19 15:41	11/05/19 14:44	7439-89-6		
Manganese, Dissolved	14.3	mg/L	0.50	0.029	50	11/03/19 15:41	11/05/19 13:52	7439-96-5		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	21.0	mg/L	20.0	20.0	1		10/29/19 18:18			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/29/19 18:18			
Alkalinity, Total as CaCO3	21.0	mg/L	20.0	20.0	1		10/29/19 18:18			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	3700	mg/L	10.0	10.0	1		10/29/19 13:01			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 21:01		F6,H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 06:25	14797-55-8	H1	

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: IW-D-2		Lab ID: 2624772005		Collected: 10/22/19 11:43		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	2.6	mg/L	1.0	0.024	1		10/30/19 16:01	16887-00-6	
Fluoride	0.38	mg/L	0.30	0.029	1		10/30/19 16:01	16984-48-8	
Sulfate	1880	mg/L	50.0	0.85	50		10/30/19 21:12	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: IW-E-1		Lab ID: 2624772006		Collected: 10/22/19 13:55		Received: 10/23/19 08:05		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum	0.027J	mg/L	0.10	0.0089	1	10/30/19 18:10	10/31/19 22:36	7429-90-5		
Antimony	ND	mg/L	0.0030	0.00027	1	10/30/19 18:10	10/31/19 22:36	7440-36-0		
Arsenic	0.024	mg/L	0.0050	0.00035	1	10/30/19 18:10	10/31/19 22:36	7440-38-2		
Barium	0.064	mg/L	0.010	0.00049	1	10/30/19 18:10	10/31/19 22:36	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/30/19 18:10	10/31/19 22:36	7440-41-7		
Boron	0.46	mg/L	0.040	0.0049	1	10/30/19 18:10	11/01/19 17:45	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/30/19 18:10	10/31/19 22:36	7440-43-9		
Calcium	26.9	mg/L	5.0	0.55	50	10/30/19 18:10	10/31/19 22:42	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/30/19 18:10	10/31/19 22:36	7440-47-3		
Cobalt	0.0030J	mg/L	0.0050	0.00030	1	10/30/19 18:10	10/31/19 22:36	7440-48-4		
Iron	33.2	mg/L	2.0	0.49	50	10/30/19 18:10	10/31/19 22:42	7439-89-6		
Lead	ND	mg/L	0.0050	0.000046	1	10/30/19 18:10	10/31/19 22:36	7439-92-1		
Lithium	0.24	mg/L	0.030	0.00078	1	10/30/19 18:10	10/31/19 22:36	7439-93-2		
Magnesium	5.3	mg/L	0.050	0.0030	1	10/30/19 18:10	10/31/19 22:36	7439-95-4		
Manganese	0.74	mg/L	0.010	0.00057	1	10/30/19 18:10	10/31/19 22:36	7439-96-5		
Molybdenum	0.0046J	mg/L	0.010	0.00095	1	10/30/19 18:10	10/31/19 22:36	7439-98-7		
Potassium	12.4	mg/L	5.0	1.3	50	10/30/19 18:10	10/31/19 22:42	7440-09-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/30/19 18:10	10/31/19 22:36	7782-49-2		
Sodium	4.1	mg/L	0.10	0.015	1	10/30/19 18:10	10/31/19 22:36	7440-23-5		
Thallium	ND	mg/L	0.0010	0.000052	1	10/30/19 18:10	10/31/19 22:36	7440-28-0		
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 21:25	7429-90-5		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 13:57	7440-41-7		
Boron, Dissolved	0.49	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 13:57	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 21:25	7440-43-9		
Cobalt, Dissolved	0.0031J	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 21:25	7440-48-4		
Iron, Dissolved	29.3	mg/L	2.0	0.49	50	11/03/19 15:41	11/05/19 14:03	7439-89-6		
Manganese, Dissolved	0.77	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 21:25	7439-96-5		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO ₃)	35.0	mg/L	20.0	20.0	1		10/29/19 18:22			
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	20.0	20.0	1		10/29/19 18:22			
Alkalinity, Total as CaCO ₃	35.0	mg/L	20.0	20.0	1		10/29/19 18:22			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	334	mg/L	10.0	10.0	1		10/29/19 13:02			
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 21:02		H1	
300.0 IC Anions		Analytical Method: EPA 300.0								
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 07:27	14797-55-8	H1	

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: IW-E-1		Lab ID: 2624772006		Collected: 10/22/19 13:55		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	2.1	mg/L	1.0	0.024	1		10/30/19 16:23	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/19 16:23	16984-48-8	
Sulfate	138	mg/L	20.0	0.34	20		10/31/19 23:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: IW-B-2		Lab ID: 2624772007		Collected: 10/22/19 15:50		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Aluminum	0.023J	mg/L	0.10	0.0089	1	11/01/19 16:00	11/04/19 01:24	7429-90-5	
Antimony	ND	mg/L	0.0030	0.00027	1	11/01/19 16:00	11/04/19 01:24	7440-36-0	
Arsenic	2.5	mg/L	0.25	0.018	50	11/01/19 16:00	11/04/19 01:29	7440-38-2	M6
Barium	0.22	mg/L	0.010	0.00049	1	11/01/19 16:00	11/04/19 01:24	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	11/01/19 16:00	11/04/19 01:24	7440-41-7	
Boron	4.3	mg/L	2.0	0.25	50	11/01/19 16:00	11/04/19 01:29	7440-42-8	
Cadmium	0.00012J	mg/L	0.0025	0.00011	1	11/01/19 16:00	11/04/19 01:24	7440-43-9	
Calcium	177	mg/L	5.0	0.55	50	11/01/19 16:00	11/04/19 01:29	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.00039	1	11/01/19 16:00	11/04/19 01:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	11/01/19 16:00	11/04/19 01:24	7440-48-4	
Iron	18.4	mg/L	2.0	0.49	50	11/01/19 16:00	11/04/19 01:29	7439-89-6	M6
Lead	ND	mg/L	0.0050	0.000046	1	11/01/19 16:00	11/04/19 01:24	7439-92-1	
Lithium	0.29	mg/L	0.030	0.00078	1	11/01/19 16:00	11/04/19 01:24	7439-93-2	M1
Magnesium	57.2	mg/L	2.5	0.15	50	11/01/19 16:00	11/04/19 01:29	7439-95-4	M6
Manganese	2.3	mg/L	0.50	0.029	50	11/01/19 16:00	11/04/19 01:29	7439-96-5	M6
Molybdenum	0.49	mg/L	0.010	0.00095	1	11/01/19 16:00	11/04/19 01:24	7439-98-7	
Potassium	13.9	mg/L	5.0	1.3	50	11/01/19 16:00	11/04/19 01:29	7440-09-7	M6
Selenium	ND	mg/L	0.010	0.0013	1	11/01/19 16:00	11/04/19 01:24	7782-49-2	
Sodium	13.5	mg/L	5.0	0.75	50	11/01/19 16:00	11/04/19 01:29	7440-23-5	M6
Thallium	ND	mg/L	0.0010	0.000052	1	11/01/19 16:00	11/04/19 01:24	7440-28-0	
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 21:42	7429-90-5	
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/05/19 14:32	7440-41-7	
Boron, Dissolved	3.8	mg/L	0.040	0.0049	1	11/03/19 15:41	11/05/19 14:32	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 21:42	7440-43-9	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 21:42	7440-48-4	
Iron, Dissolved	0.011J	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 21:42	7439-89-6	
Manganese, Dissolved	1.9	mg/L	0.050	0.0029	5	11/03/19 15:41	11/05/19 14:38	7439-96-5	
2320B Alkalinity		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	282	mg/L	20.0	20.0	1		10/29/19 18:25		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/29/19 18:25		
Alkalinity, Total as CaCO3	282	mg/L	20.0	20.0	1		10/29/19 18:25		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	950	mg/L	10.0	10.0	1		10/29/19 13:02		
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P							
Orthophosphate as P	0.032	mg/L	0.020	0.020	1		10/30/19 21:03		F6,H1
300.0 IC Anions		Analytical Method: EPA 300.0							
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 10:14	14797-55-8	H1

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: IW-B-2		Lab ID: 2624772007		Collected: 10/22/19 15:50		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	6.3	mg/L	1.0	0.024	1		10/30/19 18:36	16887-00-6	
Fluoride	1.4	mg/L	0.30	0.029	1		10/30/19 18:36	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/30/19 18:36	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: PB-4D Lab ID: 2624772008 Collected: 10/22/19 15:20 Received: 10/23/19 08:05 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Aluminum	0.33	mg/L	0.10	0.0089	1	11/01/19 16:00	11/04/19 02:15	7429-90-5	
Antimony	0.00048J	mg/L	0.0030	0.00027	1	11/01/19 16:00	11/04/19 02:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	11/01/19 16:00	11/04/19 02:15	7440-38-2	
Barium	0.0086J	mg/L	0.010	0.00049	1	11/01/19 16:00	11/04/19 02:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	11/01/19 16:00	11/04/19 13:14	7440-41-7	
Boron	0.016J	mg/L	0.040	0.0049	1	11/01/19 16:00	11/04/19 02:15	7440-42-8	B
Cadmium	ND	mg/L	0.0025	0.00011	1	11/01/19 16:00	11/04/19 02:15	7440-43-9	
Calcium	20.9	mg/L	0.10	0.011	1	11/01/19 16:00	11/04/19 02:15	7440-70-2	
Calcium	23.2	mg/L	5.0	0.55	50	11/01/19 16:00	11/04/19 02:21	7440-70-2	
Chromium	0.0015J	mg/L	0.010	0.00039	1	11/01/19 16:00	11/04/19 02:15	7440-47-3	
Cobalt	0.00083J	mg/L	0.0050	0.00030	1	11/01/19 16:00	11/04/19 02:15	7440-48-4	
Iron	0.82	mg/L	0.040	0.0097	1	11/01/19 16:00	11/04/19 02:15	7439-89-6	
Lead	0.00016J	mg/L	0.0050	0.000046	1	11/01/19 16:00	11/04/19 02:15	7439-92-1	
Lithium	0.013J	mg/L	0.030	0.00078	1	11/01/19 16:00	11/04/19 13:14	7439-93-2	
Magnesium	4.8	mg/L	0.050	0.0030	1	11/01/19 16:00	11/04/19 02:15	7439-95-4	
Manganese	0.58	mg/L	0.010	0.00057	1	11/01/19 16:00	11/04/19 02:15	7439-96-5	
Molybdenum	0.019	mg/L	0.010	0.00095	1	11/01/19 16:00	11/04/19 02:15	7439-98-7	
Potassium	16.1	mg/L	5.0	1.3	50	11/01/19 16:00	11/04/19 02:21	7440-09-7	
Selenium	ND	mg/L	0.010	0.0013	1	11/01/19 16:00	11/04/19 02:15	7782-49-2	
Sodium	16.7	mg/L	5.0	0.75	50	11/01/19 16:00	11/04/19 02:21	7440-23-5	
Thallium	ND	mg/L	0.0010	0.000052	1	11/01/19 16:00	11/04/19 02:15	7440-28-0	
6020B MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 18:07	7429-90-5	
Beryllium, Dissolved	0.00032J	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/04/19 18:07	7440-41-7	
Boron, Dissolved	ND	mg/L	0.040	0.0049	1	11/03/19 15:41	11/04/19 18:07	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 18:07	7440-43-9	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 18:07	7440-48-4	
Iron, Dissolved	0.013J	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 18:07	7439-89-6	B
Manganese, Dissolved	0.025	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 18:07	7439-96-5	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO3)	118	mg/L	20.0	20.0	1		10/30/19 20:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/30/19 20:03		
Alkalinity, Total as CaCO3	118	mg/L	20.0	20.0	1		10/30/19 20:03		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	197	mg/L	10.0	10.0	1		10/29/19 13:02		
4500PE Ortho Phosphorus Analytical Method: SM 4500-P									
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 21:03		H1
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 09:53	14797-55-8	H1

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: PB-4D		Lab ID: 2624772008		Collected: 10/22/19 15:20		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	3.1	mg/L	1.0	0.024	1		10/30/19 18:59	16887-00-6	
Fluoride	0.089J	mg/L	0.30	0.029	1		10/30/19 18:59	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.017	1		10/30/19 18:59	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: EB-4 Lab ID: 2624772009 Collected: 10/22/19 16:40 Received: 10/23/19 08:05 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Aluminum	ND	mg/L	0.10	0.0089	1	11/02/19 15:05	11/04/19 11:02	7429-90-5	
Antimony	ND	mg/L	0.0030	0.00027	1	11/02/19 15:05	11/04/19 11:02	7440-36-0	
Arsenic	0.00077J	mg/L	0.0050	0.00035	1	11/02/19 15:05	11/04/19 11:02	7440-38-2	B
Barium	0.0018J	mg/L	0.010	0.00049	1	11/02/19 15:05	11/04/19 11:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	11/02/19 15:05	11/04/19 11:02	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	11/02/19 15:05	11/04/19 11:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	11/02/19 15:05	11/04/19 11:02	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	11/02/19 15:05	11/04/19 11:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	11/02/19 15:05	11/04/19 11:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	11/02/19 15:05	11/04/19 11:02	7440-48-4	
Iron	ND	mg/L	0.040	0.0097	1	11/02/19 15:05	11/04/19 11:02	7439-89-6	
Lead	ND	mg/L	0.0050	0.000046	1	11/02/19 15:05	11/04/19 11:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	11/02/19 15:05	11/04/19 11:02	7439-93-2	
Magnesium	ND	mg/L	0.050	0.0030	1	11/02/19 15:05	11/04/19 11:02	7439-95-4	
Manganese	ND	mg/L	0.010	0.00057	1	11/02/19 15:05	11/04/19 11:02	7439-96-5	
Molybdenum	ND	mg/L	0.010	0.00095	1	11/02/19 15:05	11/04/19 11:02	7439-98-7	
Potassium	ND	mg/L	0.10	0.026	1	11/02/19 15:05	11/04/19 11:02	7440-09-7	
Selenium	ND	mg/L	0.010	0.0013	1	11/02/19 15:05	11/04/19 11:02	7782-49-2	
Sodium	ND	mg/L	0.10	0.015	1	11/02/19 15:05	11/04/19 11:02	7440-23-5	
Thallium	ND	mg/L	0.0010	0.000052	1	11/02/19 15:05	11/04/19 11:02	7440-28-0	
6020B MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 18:13	7429-90-5	
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/04/19 18:13	7440-41-7	
Boron, Dissolved	0.16	mg/L	0.040	0.0049	1	11/03/19 15:41	11/04/19 18:13	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 18:13	7440-43-9	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 18:13	7440-48-4	
Iron, Dissolved	ND	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 18:13	7439-89-6	
Manganese, Dissolved	0.0050J	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 18:13	7439-96-5	
2320B Alkalinity Low Level Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		11/01/19 12:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		11/01/19 12:21		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		11/01/19 12:21		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	10.0	mg/L	10.0	10.0	1		10/29/19 13:02		
4500PE Ortho Phosphorus Analytical Method: SM 4500-P									
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 21:04		H1
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 11:16	14797-55-8	H1

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: EB-4		Lab ID: 2624772009		Collected: 10/22/19 16:40	Received: 10/23/19 08:05	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	ND	mg/L	1.0	0.024	1		10/30/19 19:21	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/19 19:21	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/30/19 19:21	14808-79-8	

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ANALYTICAL RESULTS

Project: PLANT BRANCH
Pace Project No.: 2624772

Sample: FB-4 Lab ID: 2624772010 Collected: 10/22/19 16:30 Received: 10/23/19 08:05 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Aluminum	ND	mg/L	0.10	0.0089	1	11/02/19 15:05	11/04/19 11:08	7429-90-5	
Antimony	ND	mg/L	0.0030	0.00027	1	11/02/19 15:05	11/04/19 11:08	7440-36-0	
Arsenic	0.00049J	mg/L	0.0050	0.00035	1	11/02/19 15:05	11/04/19 11:08	7440-38-2	B
Barium	0.0019J	mg/L	0.010	0.00049	1	11/02/19 15:05	11/04/19 11:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	11/02/19 15:05	11/04/19 11:08	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	11/02/19 15:05	11/04/19 11:08	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	11/02/19 15:05	11/04/19 11:08	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	11/02/19 15:05	11/04/19 11:08	7440-70-2	
Chromium	0.00079J	mg/L	0.010	0.00039	1	11/02/19 15:05	11/04/19 11:08	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	11/02/19 15:05	11/04/19 11:08	7440-48-4	
Iron	ND	mg/L	0.040	0.0097	1	11/02/19 15:05	11/04/19 11:08	7439-89-6	
Lead	ND	mg/L	0.0050	0.000046	1	11/02/19 15:05	11/04/19 11:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	11/02/19 15:05	11/04/19 11:08	7439-93-2	
Magnesium	ND	mg/L	0.050	0.0030	1	11/02/19 15:05	11/04/19 11:08	7439-95-4	
Manganese	ND	mg/L	0.010	0.00057	1	11/02/19 15:05	11/04/19 11:08	7439-96-5	
Molybdenum	ND	mg/L	0.010	0.00095	1	11/02/19 15:05	11/04/19 11:08	7439-98-7	
Potassium	ND	mg/L	0.10	0.026	1	11/02/19 15:05	11/04/19 11:08	7440-09-7	
Selenium	ND	mg/L	0.010	0.0013	1	11/02/19 15:05	11/04/19 11:08	7782-49-2	
Sodium	ND	mg/L	0.10	0.015	1	11/02/19 15:05	11/04/19 11:08	7440-23-5	
Thallium	ND	mg/L	0.0010	0.000052	1	11/02/19 15:05	11/04/19 11:08	7440-28-0	
6020B MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 18:19	7429-90-5	
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/04/19 18:19	7440-41-7	
Boron, Dissolved	ND	mg/L	0.040	0.0049	1	11/03/19 15:41	11/04/19 18:19	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 18:19	7440-43-9	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 18:19	7440-48-4	
Iron, Dissolved	ND	mg/L	0.040	0.0097	1	11/03/19 15:41	11/04/19 18:19	7439-89-6	
Manganese, Dissolved	ND	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 18:19	7439-96-5	
2320B Alkalinity Low Level Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		11/01/19 12:27		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		11/01/19 12:27		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		11/01/19 12:27		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/29/19 13:02		
4500PE Ortho Phosphorus Analytical Method: SM 4500-P									
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 21:05		H1
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 10:55	14797-55-8	H1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: FB-4		Lab ID: 2624772010		Collected: 10/22/19 16:30		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	ND	mg/L	1.0	0.024	1		10/30/19 19:43	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/19 19:43	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/30/19 19:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: DUP-4		Lab ID: 2624772011		Collected: 10/22/19 00:00		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Aluminum	0.023J	mg/L	0.10	0.0089	1	11/02/19 15:05	11/04/19 11:14	7429-90-5	
Antimony	ND	mg/L	0.0030	0.00027	1	11/02/19 15:05	11/04/19 11:14	7440-36-0	
Arsenic	0.021	mg/L	0.0050	0.00035	1	11/02/19 15:05	11/04/19 11:14	7440-38-2	
Barium	0.062	mg/L	0.010	0.00049	1	11/02/19 15:05	11/04/19 11:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	11/02/19 15:05	11/04/19 11:14	7440-41-7	
Boron	0.46	mg/L	0.040	0.0049	1	11/02/19 15:05	11/04/19 11:14	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	11/02/19 15:05	11/04/19 11:14	7440-43-9	
Calcium	26.6	mg/L	5.0	0.55	50	11/02/19 15:05	11/04/19 11:19	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	11/02/19 15:05	11/04/19 11:14	7440-47-3	
Cobalt	0.0030J	mg/L	0.0050	0.00030	1	11/02/19 15:05	11/04/19 11:14	7440-48-4	
Iron	33.2	mg/L	2.0	0.49	50	11/02/19 15:05	11/04/19 11:19	7439-89-6	M6
Lead	ND	mg/L	0.0050	0.000046	1	11/02/19 15:05	11/04/19 11:14	7439-92-1	
Lithium	0.26	mg/L	0.030	0.00078	1	11/02/19 15:05	11/04/19 11:14	7439-93-2	
Magnesium	6.0	mg/L	0.050	0.0030	1	11/02/19 15:05	11/04/19 11:14	7439-95-4	
Manganese	0.78	mg/L	0.010	0.00057	1	11/02/19 15:05	11/04/19 11:14	7439-96-5	
Molybdenum	0.0044J	mg/L	0.010	0.00095	1	11/02/19 15:05	11/04/19 11:14	7439-98-7	
Potassium	12.9	mg/L	0.10	0.026	1	11/02/19 15:05	11/04/19 11:14	7440-09-7	
Selenium	ND	mg/L	0.010	0.0013	1	11/02/19 15:05	11/04/19 11:14	7782-49-2	
Sodium	4.7	mg/L	0.10	0.015	1	11/02/19 15:05	11/04/19 11:14	7440-23-5	
Thallium	ND	mg/L	0.0010	0.000052	1	11/02/19 15:05	11/04/19 11:14	7440-28-0	
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Aluminum, Dissolved	ND	mg/L	0.10	0.0089	1	11/03/19 15:41	11/04/19 18:25	7429-90-5	
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	11/03/19 15:41	11/04/19 18:25	7440-41-7	
Boron, Dissolved	0.44	mg/L	0.040	0.0049	1	11/03/19 15:41	11/04/19 18:25	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	11/03/19 15:41	11/04/19 18:25	7440-43-9	
Cobalt, Dissolved	0.0030J	mg/L	0.0050	0.00030	1	11/03/19 15:41	11/04/19 18:25	7440-48-4	
Iron, Dissolved	26.5	mg/L	2.0	0.49	50	11/03/19 15:41	11/05/19 14:50	7439-89-6	
Manganese, Dissolved	0.72	mg/L	0.010	0.00057	1	11/03/19 15:41	11/04/19 18:25	7439-96-5	
2320B Alkalinity		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	22.0	mg/L	20.0	20.0	1		11/04/19 14:11		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		11/04/19 14:11		
Alkalinity, Total as CaCO3	22.0	mg/L	20.0	20.0	1		11/04/19 14:11		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	321	mg/L	10.0	10.0	1		10/29/19 13:02		
4500PE Ortho Phosphorus		Analytical Method: SM 4500-P							
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/30/19 21:06		H1
300.0 IC Anions		Analytical Method: EPA 300.0							
Nitrate as N	ND	mg/L	0.050	0.0050	1		10/29/19 04:21	14797-55-8	H1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 2624772

Sample: DUP-4		Lab ID: 2624772011		Collected: 10/22/19 00:00		Received: 10/23/19 08:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	2.0	mg/L	1.0	0.024	1		10/30/19 20:27	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/19 20:27	16984-48-8	
Sulfate	136	mg/L	20.0	0.34	20		10/31/19 23:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BRANCH
Pace Project No.: 2624772

QC Batch: 37868 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006

METHOD BLANK: 171883 Matrix: Water
Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.0089	10/31/19 17:44	
Antimony	mg/L	ND	0.0030	0.00027	10/31/19 17:44	
Arsenic	mg/L	ND	0.0050	0.00035	10/31/19 17:44	
Barium	mg/L	ND	0.010	0.00049	10/31/19 17:44	
Beryllium	mg/L	ND	0.0030	0.000074	10/31/19 17:44	
Boron	mg/L	ND	0.040	0.0049	10/31/19 17:44	
Cadmium	mg/L	ND	0.0025	0.00011	10/31/19 17:44	
Calcium	mg/L	ND	0.10	0.011	10/31/19 17:44	
Chromium	mg/L	ND	0.010	0.00039	10/31/19 17:44	
Cobalt	mg/L	ND	0.0050	0.00030	10/31/19 17:44	
Iron	mg/L	ND	0.040	0.0097	10/31/19 17:44	
Lead	mg/L	ND	0.0050	0.000046	10/31/19 17:44	
Lithium	mg/L	ND	0.030	0.00078	10/31/19 17:44	
Magnesium	mg/L	ND	0.050	0.0030	10/31/19 17:44	
Manganese	mg/L	ND	0.010	0.00057	10/31/19 17:44	
Molybdenum	mg/L	ND	0.010	0.00095	10/31/19 17:44	
Potassium	mg/L	ND	0.10	0.026	10/31/19 17:44	
Selenium	mg/L	ND	0.010	0.0013	10/31/19 17:44	
Sodium	mg/L	ND	0.10	0.015	10/31/19 17:44	
Thallium	mg/L	ND	0.0010	0.000052	10/31/19 17:44	

LABORATORY CONTROL SAMPLE: 171884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.1	109	80-120	
Antimony	mg/L	0.1	0.11	110	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.11	105	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.11	106	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	0.1	0.11	106	80-120	
Cobalt	mg/L	0.1	0.11	105	80-120	
Iron	mg/L	1	1.1	106	80-120	
Lead	mg/L	0.1	0.11	107	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Manganese	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.11	106	80-120	

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

LABORATORY CONTROL SAMPLE: 171884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	mg/L	1	1.0	103	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Sodium	mg/L	1	1.0	103	80-120	
Thallium	mg/L	0.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171931 171932

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		2624685003 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Aluminum	mg/L	0.22	1	1	1.2	1.2	96	95	75-125	1	20	
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	112	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.11	103	106	75-125	2	20	
Barium	mg/L	0.014	0.1	0.1	0.12	0.12	103	103	75-125	1	20	
Beryllium	mg/L	0.00088	0.1	0.1	0.091	0.094	90	93	75-125	3	20	
Boron	mg/L	0.59	1	1	1.5	1.5	91	91	75-125	0	20	
Cadmium	mg/L	0.00045J	0.1	0.1	0.11	0.11	105	107	75-125	2	20	
Calcium	mg/L	52.6	1	1	52.7	51.5	10	-112	75-125	2	20	M6
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Cobalt	mg/L	0.073	0.1	0.1	0.17	0.17	97	97	75-125	0	20	
Iron	mg/L	2.3	1	1	2.9	2.9	61	59	75-125	1	20	M1
Lead	mg/L	0.00013J	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Lithium	mg/L	0.0015J	0.1	0.1	0.097	0.10	95	98	75-125	3	20	
Magnesium	mg/L	14.5	1	1	15.6	15.0	105	42	75-125	4	20	M6
Manganese	mg/L	9.4	0.1	0.1	9.3	9.1	-153	-325	75-125	2	20	M6
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	104	104	75-125	0	20	
Potassium	mg/L	7.0	1	1	7.8	7.7	79	72	75-125	1	20	M1
Selenium	mg/L	0.0022J	0.1	0.1	0.11	0.11	104	104	75-125	0	20	
Sodium	mg/L	22.2	1	1	22.8	22.0	62	-21	75-125	4	20	M6
Thallium	mg/L	0.00037J	0.1	0.1	0.10	0.10	101	101	75-125	0	20	

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QUALITY CONTROL DATA

Project: PLANT BRANCH
Pace Project No.: 2624772

QC Batch: 38024 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624772007, 2624772008

METHOD BLANK: 172889 Matrix: Water
Associated Lab Samples: 2624772007, 2624772008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.0089	11/04/19 01:12	
Antimony	mg/L	ND	0.0030	0.00027	11/04/19 01:12	
Arsenic	mg/L	ND	0.0050	0.00035	11/04/19 01:12	
Barium	mg/L	ND	0.010	0.00049	11/04/19 01:12	
Beryllium	mg/L	ND	0.0030	0.000074	11/04/19 01:12	
Boron	mg/L	0.0059J	0.040	0.0049	11/04/19 01:12	
Cadmium	mg/L	ND	0.0025	0.00011	11/04/19 01:12	
Calcium	mg/L	ND	0.10	0.011	11/04/19 01:12	
Chromium	mg/L	ND	0.010	0.00039	11/04/19 01:12	
Cobalt	mg/L	ND	0.0050	0.00030	11/04/19 01:12	
Iron	mg/L	ND	0.040	0.0097	11/04/19 01:12	
Lead	mg/L	ND	0.0050	0.000046	11/04/19 01:12	
Lithium	mg/L	ND	0.030	0.00078	11/04/19 01:12	
Magnesium	mg/L	ND	0.050	0.0030	11/04/19 01:12	
Manganese	mg/L	ND	0.010	0.00057	11/04/19 01:12	
Molybdenum	mg/L	ND	0.010	0.00095	11/04/19 01:12	
Potassium	mg/L	ND	0.10	0.026	11/04/19 01:12	
Selenium	mg/L	ND	0.010	0.0013	11/04/19 01:12	
Sodium	mg/L	ND	0.10	0.015	11/04/19 01:12	
Thallium	mg/L	ND	0.0010	0.000052	11/04/19 01:12	

LABORATORY CONTROL SAMPLE: 172890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.1	114	80-120	
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.11	114	80-120	
Boron	mg/L	1	1.2	116	80-120	
Cadmium	mg/L	0.1	0.11	106	80-120	
Calcium	mg/L	1	1.1	106	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Iron	mg/L	1	1.0	104	80-120	
Lead	mg/L	0.1	0.10	102	80-120	
Lithium	mg/L	0.1	0.11	112	80-120	
Magnesium	mg/L	1	1.1	107	80-120	
Manganese	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

LABORATORY CONTROL SAMPLE: 172890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	mg/L	1	1.0	105	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Sodium	mg/L	1	1.1	108	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 172891 172892

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624772007 Result	Spike Conc.	Spike Conc.	MS Result						
Aluminum	mg/L	ND	1	1	1.0	0.94	98	91	75-125	7	20
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	106	104	75-125	2	20
Arsenic	mg/L	2.5	0.1	0.1	2.6	2.6	43	106	75-125	2	20 M6
Barium	mg/L	0.22	0.1	0.1	0.32	0.31	99	98	75-125	0	20
Beryllium	mg/L	ND	0.1	0.1	0.090	0.086	90	86	75-125	5	20
Boron	mg/L	3.8	1	1	5.1	5.2	85	95	75-125	2	20
Cadmium	mg/L	ND	0.1	0.1	0.11	0.10	107	103	75-125	4	20
Calcium	mg/L	177	1	1	170	179	-693	243	75-125	5	20 M6
Chromium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20
Cobalt	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	0	20
Iron	mg/L	18.4	1	1	18.9	19.7	50	130	75-125	4	20 M6
Lead	mg/L	ND	0.1	0.1	0.092	0.090	92	90	75-125	2	20
Lithium	mg/L	0.29	0.1	0.1	0.36	0.36	73	75	75-125	1	20 M1
Magnesium	mg/L	57.2	1	1	53.7	56.5	-353	-68	75-125	5	20 M6
Manganese	mg/L	1.9	0.1	0.1	2.4	2.5	73	163	75-125	4	20 M6
Molybdenum	mg/L	0.49	0.1	0.1	0.58	0.60	89	105	75-125	3	20
Potassium	mg/L	13.9	1	1	13.5	14.5	-48	56	75-125	7	20 M6
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20
Sodium	mg/L	13.5	1	1	13.4	13.8	-13	25	75-125	3	20 M6
Thallium	mg/L	ND	0.1	0.1	0.093	0.092	93	92	75-125	2	20

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QUALITY CONTROL DATA

Project: PLANT BRANCH
Pace Project No.: 2624772

QC Batch: 38068 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624772009, 2624772010, 2624772011

METHOD BLANK: 173068 Matrix: Water
Associated Lab Samples: 2624772009, 2624772010, 2624772011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.0089	11/04/19 10:51	
Antimony	mg/L	ND	0.0030	0.00027	11/04/19 10:51	
Arsenic	mg/L	0.00064J	0.0050	0.00035	11/04/19 10:51	
Barium	mg/L	ND	0.010	0.00049	11/04/19 10:51	
Beryllium	mg/L	ND	0.0030	0.000074	11/04/19 10:51	
Boron	mg/L	ND	0.040	0.0049	11/04/19 10:51	
Cadmium	mg/L	ND	0.0025	0.00011	11/04/19 10:51	
Calcium	mg/L	ND	0.10	0.011	11/04/19 10:51	
Chromium	mg/L	0.00058J	0.010	0.00039	11/04/19 10:51	
Cobalt	mg/L	ND	0.0050	0.00030	11/04/19 10:51	
Iron	mg/L	ND	0.040	0.0097	11/04/19 10:51	
Lead	mg/L	ND	0.0050	0.000046	11/04/19 10:51	
Lithium	mg/L	ND	0.030	0.00078	11/04/19 10:51	
Magnesium	mg/L	ND	0.050	0.0030	11/04/19 10:51	
Manganese	mg/L	ND	0.010	0.00057	11/04/19 10:51	
Molybdenum	mg/L	ND	0.010	0.00095	11/04/19 10:51	
Potassium	mg/L	ND	0.10	0.026	11/04/19 10:51	
Selenium	mg/L	ND	0.010	0.0013	11/04/19 10:51	
Sodium	mg/L	ND	0.10	0.015	11/04/19 10:51	
Thallium	mg/L	ND	0.0010	0.000052	11/04/19 10:51	

LABORATORY CONTROL SAMPLE: 173069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.1	107	80-120	
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	0.097	97	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.93	93	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Iron	mg/L	1	0.98	98	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Magnesium	mg/L	1	0.97	97	80-120	
Manganese	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

LABORATORY CONTROL SAMPLE: 173069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	mg/L	1	0.98	98	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Sodium	mg/L	1	0.97	97	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 173072 173073

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		2624772011 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Aluminum	mg/L	ND	1	1	1.1	1.1	106	110	75-125	4	20		
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Arsenic	mg/L	0.021	0.1	0.1	0.12	0.12	99	98	75-125	1	20		
Barium	mg/L	0.062	0.1	0.1	0.16	0.15	97	93	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.095	0.094	95	94	75-125	1	20		
Boron	mg/L	0.44	1	1	1.4	1.4	92	89	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.11	103	105	75-125	2	20		
Calcium	mg/L	26.6	1	1	27.7	27.6	108	93	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.099	0.10	99	103	75-125	4	20		
Cobalt	mg/L	0.0030J	0.1	0.1	0.099	0.10	96	100	75-125	4	20		
Iron	mg/L	26.5	1	1	33.6	32.8	43	-33	75-125	2	20	M6	
Lead	mg/L	ND	0.1	0.1	0.094	0.092	94	92	75-125	3	20		
Lithium	mg/L	0.26	0.1	0.1	0.37	0.35	108	94	75-125	4	20		
Magnesium	mg/L	6.0	1	1	7.0	6.8	99	81	75-125	3	20		
Manganese	mg/L	0.72	0.1	0.1	0.88	0.90	95	121	75-125	3	20		
Molybdenum	mg/L	0.0044J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Potassium	mg/L	12.9	1	1	14.1	13.7	122	80	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	2	20		
Sodium	mg/L	4.7	1	1	5.5	5.5	84	75	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 38026 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
 Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007

METHOD BLANK: 172898 Matrix: Water
 Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	mg/L	ND	0.10	0.0089	11/04/19 17:03	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000074	11/04/19 17:03	
Boron, Dissolved	mg/L	ND	0.040	0.0049	11/04/19 17:03	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00011	11/04/19 17:03	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00030	11/04/19 17:03	
Iron, Dissolved	mg/L	ND	0.040	0.0097	11/04/19 17:03	
Manganese, Dissolved	mg/L	ND	0.010	0.00057	11/04/19 17:03	

LABORATORY CONTROL SAMPLE: 172899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	mg/L	1	1.1	112	80-120	
Beryllium, Dissolved	mg/L	0.1	0.10	104	80-120	
Boron, Dissolved	mg/L	1	1.0	101	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	100	80-120	
Cobalt, Dissolved	mg/L	0.1	0.10	100	80-120	
Iron, Dissolved	mg/L	1	1.0	102	80-120	
Manganese, Dissolved	mg/L	0.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 172900 172901

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624635001 Result	Spike Conc.	Spike Conc.	Result						
Aluminum, Dissolved	mg/L	ND	1	1	1.1	1.1	105	108	75-125	3	20
Beryllium, Dissolved	mg/L	0.00089J	0.1	0.1	0.098	0.094	97	93	75-125	4	20
Boron, Dissolved	mg/L	0.93	1	1	1.9	1.8	99	84	75-125	8	20
Cadmium, Dissolved	mg/L	0.00022J	0.1	0.1	0.10	0.10	102	100	75-125	3	20
Cobalt, Dissolved	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20
Iron, Dissolved	mg/L	ND	1	1	0.99	0.99	99	99	75-125	0	20
Manganese, Dissolved	mg/L	0.0045J	0.1	0.1	0.11	0.11	104	104	75-125	0	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BRANCH
Pace Project No.: 2624772

QC Batch: 38081 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 2624772008, 2624772009, 2624772010, 2624772011

METHOD BLANK: 173094 Matrix: Water
Associated Lab Samples: 2624772008, 2624772009, 2624772010, 2624772011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	mg/L	ND	0.10	0.0089	11/04/19 17:56	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000074	11/04/19 17:56	
Boron, Dissolved	mg/L	ND	0.040	0.0049	11/04/19 17:56	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00011	11/04/19 17:56	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00030	11/04/19 17:56	
Iron, Dissolved	mg/L	0.013J	0.040	0.0097	11/04/19 17:56	
Manganese, Dissolved	mg/L	ND	0.010	0.00057	11/04/19 17:56	

LABORATORY CONTROL SAMPLE: 173095

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	mg/L	1	1.0	101	80-120	
Beryllium, Dissolved	mg/L	0.1	0.096	96	80-120	
Boron, Dissolved	mg/L	1	0.98	98	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	102	80-120	
Cobalt, Dissolved	mg/L	0.1	0.10	101	80-120	
Iron, Dissolved	mg/L	1	1.1	105	80-120	
Manganese, Dissolved	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 173096 173097

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		2624780001	Spike Conc.	Spike Conc.	Result							
Aluminum, Dissolved	mg/L	0.046J	1	1	1.0	0.98	97	94	75-125	3	20	
Beryllium, Dissolved	mg/L	ND	0.1	0.1	0.095	0.091	95	91	75-125	4	20	
Boron, Dissolved	mg/L	1.8	1	1	2.7	2.6	89	79	75-125	4	20	
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.095	100	95	75-125	6	20	
Cobalt, Dissolved	mg/L	0.00030J	0.1	0.1	0.10	0.096	101	96	75-125	5	20	
Iron, Dissolved	mg/L	ND	1	1	0.98	0.94	97	93	75-125	4	20	
Manganese, Dissolved	mg/L	0.027	0.1	0.1	0.12	0.12	96	96	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 37769

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Associated Lab Samples: 2624772002, 2624772004, 2624772005, 2624772006, 2624772007

METHOD BLANK: 171447

Matrix: Water

Associated Lab Samples: 2624772002, 2624772004, 2624772005, 2624772006, 2624772007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	20.0	20.0	10/29/19 17:56	

LABORATORY CONTROL SAMPLE: 171448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	100	99.0	99	85-115	

SAMPLE DUPLICATE: 171489

Parameter	Units	2624772002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	190	190	0	10	

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 37830	Analysis Method: SM 2320B
QC Batch Method: SM 2320B	Analysis Description: 2320B Alkalinity
Associated Lab Samples: 2624772008	

METHOD BLANK: 171694 Matrix: Water

Associated Lab Samples: 2624772008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	20.0	20.0	10/30/19 19:32	

LABORATORY CONTROL SAMPLE: 171695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	100	101	101	85-115	

SAMPLE DUPLICATE: 172043

Parameter	Units	2624772008 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	118	117	1	10	

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QUALITY CONTROL DATA

Project: PLANT BRANCH
Pace Project No.: 2624772

QC Batch: 38111 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 2624772011

METHOD BLANK: 173233 Matrix: Water
Associated Lab Samples: 2624772011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	20.0	20.0	11/04/19 12:04	

LABORATORY CONTROL SAMPLE: 173234

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	100	97.0	97	85-115	

SAMPLE DUPLICATE: 173252

Parameter	Units	2624818005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	655	660	1	10	

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 37989 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity, Low Level
Associated Lab Samples: 2624772001, 2624772003, 2624772009, 2624772010

METHOD BLANK: 172677 Matrix: Water
Associated Lab Samples: 2624772001, 2624772003, 2624772009, 2624772010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	1.0	1.0	11/01/19 11:59	

LABORATORY CONTROL SAMPLE: 172678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.0	100	85-115	

SAMPLE DUPLICATE: 172829

Parameter	Units	2624772009 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: PLANT BRANCH
Pace Project No.: 2624772

QC Batch: 37734 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

LABORATORY CONTROL SAMPLE: 171260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	395	99	84-108	

SAMPLE DUPLICATE: 171261

Parameter	Units	2624674001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	269	270	0	10	

SAMPLE DUPLICATE: 171262

Parameter	Units	2624786001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	693	709	2	10	

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 37857 Analysis Method: SM 4500-P
QC Batch Method: SM 4500-P Analysis Description: 4500PE Ortho Phosphorus
Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

METHOD BLANK: 171773 Matrix: Water
Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.020	10/30/19 20:43	

LABORATORY CONTROL SAMPLE: 171774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171775 171776

Parameter	Units	2624949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	ND	0.5	0.5	0.53	0.52	105	105	80-120	1	10	

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 37577 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

METHOD BLANK: 170482 Matrix: Water
 Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.050	0.0050	10/26/19 03:48	

LABORATORY CONTROL SAMPLE: 170483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	10	10.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 170484 170485

Parameter	Units	2624772011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	ND	10	10	9.7	9.9	97	99	90-110	2	15	H1

MATRIX SPIKE SAMPLE: 170486

Parameter	Units	2624772001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	0.016J	10	10.0	100	90-110	H1

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QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 2624772

QC Batch: 37829 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

METHOD BLANK: 171687 Matrix: Water
 Associated Lab Samples: 2624772001, 2624772002, 2624772003, 2624772004, 2624772005, 2624772006, 2624772007, 2624772008, 2624772009, 2624772010, 2624772011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.024	10/30/19 13:03	
Fluoride	mg/L	ND	0.30	0.029	10/30/19 13:03	
Sulfate	mg/L	ND	1.0	0.017	10/30/19 13:03	

LABORATORY CONTROL SAMPLE: 171688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.0	100	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	9.6	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 171689 171690

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624772001	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	2.1	10	10	12.2	12.2	101	101	90-110	1	15		
Fluoride	mg/L	ND	10	10	10.4	10.4	104	104	90-110	0	15		

MATRIX SPIKE SAMPLE: 171691

Parameter	Units	2624772010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	ND	10	9.9	99	90-110	
Fluoride	mg/L	ND	10	10.1	101	90-110	
Sulfate	mg/L	ND	10	9.8	98	90-110	

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QUALIFIERS

Project: PLANT BRANCH

Pace Project No.: 2624772

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.

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.

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

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TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

F6 Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.

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: PLANT BRANCH
Pace Project No.: 2624772

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624772001	PZ-13S	EPA 3005A	37868	EPA 6020B	37912
2624772002	PZ-14I	EPA 3005A	37868	EPA 6020B	37912
2624772003	PZ-14S	EPA 3005A	37868	EPA 6020B	37912
2624772004	IW-C-2	EPA 3005A	37868	EPA 6020B	37912
2624772005	IW-D-2	EPA 3005A	37868	EPA 6020B	37912
2624772006	IW-E-1	EPA 3005A	37868	EPA 6020B	37912
2624772007	IW-B-2	EPA 3005A	38024	EPA 6020B	38049
2624772008	PB-4D	EPA 3005A	38024	EPA 6020B	38049
2624772009	EB-4	EPA 3005A	38068	EPA 6020B	38073
2624772010	FB-4	EPA 3005A	38068	EPA 6020B	38073
2624772011	DUP-4	EPA 3005A	38068	EPA 6020B	38073
2624772001	PZ-13S	EPA 3005A	38026	EPA 6020B	38086
2624772002	PZ-14I	EPA 3005A	38026	EPA 6020B	38086
2624772003	PZ-14S	EPA 3005A	38026	EPA 6020B	38086
2624772004	IW-C-2	EPA 3005A	38026	EPA 6020B	38086
2624772005	IW-D-2	EPA 3005A	38026	EPA 6020B	38086
2624772006	IW-E-1	EPA 3005A	38026	EPA 6020B	38086
2624772007	IW-B-2	EPA 3005A	38026	EPA 6020B	38086
2624772008	PB-4D	EPA 3005A	38081	EPA 6020B	38089
2624772009	EB-4	EPA 3005A	38081	EPA 6020B	38089
2624772010	FB-4	EPA 3005A	38081	EPA 6020B	38089
2624772011	DUP-4	EPA 3005A	38081	EPA 6020B	38089
2624772002	PZ-14I	SM 2320B	37769		
2624772004	IW-C-2	SM 2320B	37769		
2624772005	IW-D-2	SM 2320B	37769		
2624772006	IW-E-1	SM 2320B	37769		
2624772007	IW-B-2	SM 2320B	37769		
2624772008	PB-4D	SM 2320B	37830		
2624772011	DUP-4	SM 2320B	38111		
2624772001	PZ-13S	SM 2320B	37989		
2624772003	PZ-14S	SM 2320B	37989		
2624772009	EB-4	SM 2320B	37989		
2624772010	FB-4	SM 2320B	37989		
2624772001	PZ-13S	SM 2540C	37734		
2624772002	PZ-14I	SM 2540C	37734		
2624772003	PZ-14S	SM 2540C	37734		
2624772004	IW-C-2	SM 2540C	37734		
2624772005	IW-D-2	SM 2540C	37734		
2624772006	IW-E-1	SM 2540C	37734		
2624772007	IW-B-2	SM 2540C	37734		
2624772008	PB-4D	SM 2540C	37734		
2624772009	EB-4	SM 2540C	37734		
2624772010	FB-4	SM 2540C	37734		
2624772011	DUP-4	SM 2540C	37734		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BRANCH
Pace Project No.: 2624772

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624772001	PZ-13S	SM 4500-P	37857		
2624772002	PZ-14I	SM 4500-P	37857		
2624772003	PZ-14S	SM 4500-P	37857		
2624772004	IW-C-2	SM 4500-P	37857		
2624772005	IW-D-2	SM 4500-P	37857		
2624772006	IW-E-1	SM 4500-P	37857		
2624772007	IW-B-2	SM 4500-P	37857		
2624772008	PB-4D	SM 4500-P	37857		
2624772009	EB-4	SM 4500-P	37857		
2624772010	FB-4	SM 4500-P	37857		
2624772011	DUP-4	SM 4500-P	37857		
2624772001	PZ-13S	EPA 300.0	37577		
2624772002	PZ-14I	EPA 300.0	37577		
2624772003	PZ-14S	EPA 300.0	37577		
2624772004	IW-C-2	EPA 300.0	37577		
2624772005	IW-D-2	EPA 300.0	37577		
2624772006	IW-E-1	EPA 300.0	37577		
2624772007	IW-B-2	EPA 300.0	37577		
2624772008	PB-4D	EPA 300.0	37577		
2624772009	EB-4	EPA 300.0	37577		
2624772010	FB-4	EPA 300.0	37577		
2624772011	DUP-4	EPA 300.0	37577		
2624772001	PZ-13S	EPA 300.0	37829		
2624772002	PZ-14I	EPA 300.0	37829		
2624772003	PZ-14S	EPA 300.0	37829		
2624772004	IW-C-2	EPA 300.0	37829		
2624772005	IW-D-2	EPA 300.0	37829		
2624772006	IW-E-1	EPA 300.0	37829		
2624772007	IW-B-2	EPA 300.0	37829		
2624772008	PB-4D	EPA 300.0	37829		
2624772009	EB-4	EPA 300.0	37829		
2624772010	FB-4	EPA 300.0	37829		
2624772011	DUP-4	EPA 300.0	37829		

REPORT OF LABORATORY ANALYSIS

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2624772

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: scsinvoices@southernco.com

State: Georgia City: Milledgeville Time Zone Collected:
 JPT JMT JCT XJET

Project Name: Plant Branch
 Project #: 166625418.022A
 Pace Profile#
 Pace Project Manager: betsy.mcdaniel@pacelabs.com

Collected By (print): Travis Martinez
 Quote #:
 Turnaround Date Required:
 Rush: Same Day Next Day
 2 Day 3 Day 4 Day 5 Day
 (Expedite Charges Apply)

Collected By (signature): *[Signature]*
 Immediately Packed on Ice:
 Yes No
 Field Filtered (if applicable):
 Yes No
 Analysis: _____

LAB USE ONLY - Affix Workorder/Login Label
 MTJL Log-in Nu: 2624772

ALL SHADED AREAS are for LAB USE ONLY

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

* 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		Res Cl	# of Ctrs
			Date	Time	Date	Time		
PZ-135	GW	G	10/22/2019	9:45			6	1
PZ-141	GW	G	10/22/2019	11:20			6	1
PZ-145	GW	G	10/22/2019	12:50			6	1
IW-C-2	GW	G	10/22/2019	9:51			6	1
IW-D-1	GW	G	--	--				
IW-D-2	GW	G	10/22/2019	11:43			8	1
IW-E-1	GW	G	10/22/2019	13:55			6	1
IW-B-2	GW	G	10/22/2019	15:50			6	1
PB-4D	GW	G	10/22/2019	15:20			6	1
EB-4	W	G	10/22/2019	1640			6	1
FB-4	W	G	10/22/2019	1630			6	1
DUP-4	GW	G	10/22/2019	--			6	1

Analyses	Lab Profile/Line:
App III/IV metals & total metals-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 Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____
Dissolved Metals by 200.7 (Lab Filter)	LAB USE ONLY: Lab Sample # / Comments:
Cations / Anions (phosphate lab filtered)	
Radium 226,228	
Chloride, Fluoride, Sulfate, TDS	

(Total / Dissolved Metals): Al, B, Be, Cd, Co, Fe, Mn
 (Cations/Anions): Bicarbonate/Carbonate Alkalinity, Nitrate, Phosphate, Sodium, Magnesium, Potassium. (App III Metals): B, Ca, (App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl
 NOTE: Total Boron only required for single analysis (tested for both Total/Dissolved and App III Analysis)

Type of Ice Used: Wet Blue Dry None
 SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used:
 Lab Tracking #:
 Samples received via:
 FEDEX UPS Client Courier Pace Courier

Radchem sample(s) screened (<500 cpm): Y N NA
 Lab Sample Temperature Info:
 Temp Blank Received: Y N NA
 Therm ID#: _____
 Cooler 1 Temp Upon Receipt: 59
 Cooler 1 Therm Corr. Factor: _____
 Cooler 1 Corrected Temp: _____
 Comments:

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10-23-19 / 0805	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10/23/2019	MTJL LAB USE ONLY
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Accnum: 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

Client 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 3.4

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: _____

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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 checked="" 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>GW/W</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

3000 W28

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)

November 21, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

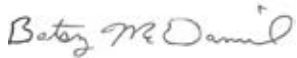
RE: Project: PLANT BRANCH RAD
Pace Project No.: 2624779

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 25, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT BRANCH RAD
Pace Project No.: 2624779

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624779001	IW-B-1	Water	10/24/19 10:10	10/25/19 11:00
2624779002	SW-B-1	Water	10/24/19 13:52	10/25/19 11:00
2624779003	SW-E-1	Water	10/24/19 12:45	10/25/19 11:00
2624779004	EB-5	Water	10/24/19 10:51	10/25/19 11:00

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SAMPLE ANALYTE COUNT

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624779001	IW-B-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624779002	SW-B-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624779003	SW-E-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624779004	EB-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

Sample: IW-B-1 **Lab ID: 2624779001** Collected: 10/24/19 10:10 Received: 10/25/19 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.644 ± 0.309 (0.329) C:90% T:NA	pCi/L	11/20/19 08:32	13982-63-3	
Radium-228	EPA 9320	0.800 ± 0.403 (0.706) C:81% T:93%	pCi/L	11/19/19 16:31	15262-20-1	
Total Radium	Total Radium Calculation	1.44 ± 0.712 (1.04)	pCi/L	11/20/19 14:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

Sample: **SW-B-1** Lab ID: **2624779002** Collected: 10/24/19 13:52 Received: 10/25/19 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.362 ± 0.294 (0.500) C:66% T:NA	pCi/L	11/20/19 08:32	13982-63-3	
Radium-228	EPA 9320	0.274 ± 0.391 (0.841) C:81% T:83%	pCi/L	11/19/19 16:31	15262-20-1	
Total Radium	Total Radium Calculation	0.636 ± 0.685 (1.34)	pCi/L	11/20/19 14:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

Sample: **SW-E-1** Lab ID: **2624779003** Collected: 10/24/19 12:45 Received: 10/25/19 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.593 ± 0.324 (0.420) C:87% T:NA	pCi/L	11/20/19 08:08	13982-63-3	
Radium-228	EPA 9320	0.323 ± 0.466 (1.00) C:81% T:87%	pCi/L	11/19/19 17:41	15262-20-1	
Total Radium	Total Radium Calculation	0.916 ± 0.790 (1.42)	pCi/L	11/20/19 14:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

Sample: **EB-5** Lab ID: **2624779004** Collected: 10/24/19 10:51 Received: 10/25/19 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.316 ± 0.228 (0.362) C:94% T:NA	pCi/L	11/20/19 08:08	13982-63-3	
Radium-228	EPA 9320	0.610 ± 0.425 (0.821) C:81% T:92%	pCi/L	11/19/19 17:41	15262-20-1	
Total Radium	Total Radium Calculation	0.926 ± 0.653 (1.18)	pCi/L	11/20/19 14:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: PLANT BRANCH RAD

Pace Project No.: 2624779

QC Batch:	369884	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	2624779001, 2624779002, 2624779003, 2624779004		

METHOD BLANK:	1794407	Matrix:	Water
Associated Lab Samples:	2624779001, 2624779002, 2624779003, 2624779004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.823 ± 0.392 (0.668) C:78% T:93%	pCi/L	11/19/19 12:53	

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: PLANT BRANCH RAD

Pace Project No.: 2624779

QC Batch:	369883	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	2624779001, 2624779002, 2624779003, 2624779004		

METHOD BLANK:	1794406	Matrix:	Water
Associated Lab Samples:	2624779001, 2624779002, 2624779003, 2624779004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.162 ± 0.185 (0.360) C:94% T:NA	pCi/L	11/20/19 08:32	

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 RAD

Pace Project No.: 2624779

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.

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.

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.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BRANCH RAD

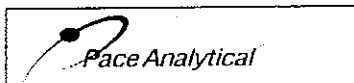
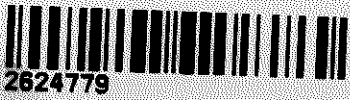
Pace Project No.: 2624779

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624779001	IW-B-1	EPA 9315	369883		
2624779002	SW-B-1	EPA 9315	369883		
2624779003	SW-E-1	EPA 9315	369883		
2624779004	EB-5	EPA 9315	369883		
2624779001	IW-B-1	EPA 9320	369884		
2624779002	SW-B-1	EPA 9320	369884		
2624779003	SW-E-1	EPA 9320	369884		
2624779004	EB-5	EPA 9320	369884		
2624779001	IW-B-1	Total Radium Calculation	371956		
2624779002	SW-B-1	Total Radium Calculation	371956		
2624779003	SW-E-1	Total Radium Calculation	371956		
2624779004	EB-5	Total Radium Calculation	371956		

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WO#: 2624779



CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY -

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

Billing Information:
 Email To: scainvoices@southernco.com

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

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

Project Name: Branch 166625418.022A
 Project #: [] PT [] MT [] CT [] XJET
 Pace Profile#

Collected By (print): Devin Thomas Travis Martinez
 Purchase Order #: []
 Quote #: []
 Turnaround Date Required: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply)

Immediately Packed on Ice: [] Yes [] No
 Field Filtered (if applicable): [] Yes [] No
 Analysis: _____

ALL SHADED AREAS are for LAB USE ONLY

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	App II/IV metals & total metals - see comments	Dissolved Metals by 200.7 (Lab Filter)	Cations / Anions (phosphate lab filtered)	Radium 226.228	Chloride, Fluoride, Sulfate, TDS	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 GI Strips: Sample pH Acceptable Y N NA pH Strips: Sulfide Present Y N NA Lead Acetate Strips: _____ LAB USE ONLY: Lab Sample # / Comments:
			Date	Time	Date	Time								
IW-B-1	GW	G	10/24/2019	10:10			8	1	1	1	4	1	RAD-5	
SW-B-1	SW	G	10/24/2019	13:52			6	1	1	1	2	1		
SW-E-1	SW	G	10/24/2019	12:45			6	1	1	1	2	1		
EB-5	W	G	10/24/2019	10:51			6	1	1	1	2	1		

* 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)

(Total / Dissolved Metals): Al, B, Be, Cd, Co, Fe, Mn
 (Cations/Anions): Bicarbonate/Carbonate Alkalinity, Nitrate, Phosphate, Sodium, Magnesium, Potassium. (App III Metals): B, Ca, (App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl
 NOTE: Total Boron only required for single analysis (listed for both Total/Dissolved and App III Analysis)

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: 10-25-19 1058
 Relinquished by/Company: (Signature)
 Date/Time:
 Relinquished by/Company: (Signature)
 Date/Time:

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

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:

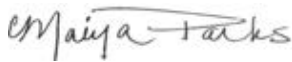
Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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

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

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

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

Sample:	Lab ID:	Collected:	Received:	Matrix:				
LR-1	92501802001	10/22/20 12:10	10/22/20 15:14	Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
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
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	24.2	mg/L	5.0	1		10/28/20 13:19		
Alkalinity, Total as CaCO ₃	24.2	mg/L	5.0	1		10/28/20 13:19		
300.0 IC Anions 28 Days								
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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	25.6	mg/L	5.0	1		10/28/20 13:25		
Alkalinity, Total as CaCO ₃	25.6	mg/L	5.0	1		10/28/20 13:25		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	25.8	mg/L	5.0	1		10/28/20 13:31		
Alkalinity, Total as CaCO ₃	25.8	mg/L	5.0	1		10/28/20 13:31		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		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
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.8	mg/L	0.20	1	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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
9040 pH								
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
2320B Alkalinity								
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		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.0	mg/L	1.0	1		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

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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	92501802001 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	0.95	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	

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

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	

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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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REPORT OF LABORATORY ANALYSIS

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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 ₃	mg/L	ND	5.0	10/28/20 12:39	
Alkalinity, Bicarbonate (CaCO ₃)	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 ₃	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 ₃	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 ₃	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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92501802001 Result	Spike Conc.	Spike Conc.	Conc.								
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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92501621017 Result	Spike Conc.	Spike Conc.	Conc.								
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		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

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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Sample Condition Upon Receipt



Client Name: GA POWER

WO#: 92501802

PM: MP Due Date: 10/29/20

CLIENT: GA-ArcadAtI

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 TH214 Type of Ice: Ice Blue None Samples on ice, cooling process has begun

Cooler Temperature 10.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: KRW 10/22/20

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. <u>Standard</u>
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, 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)

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

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

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

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

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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
6010D ATL ICP								
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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	25.8	mg/L	5.0	1		02/10/21 14:12		
Alkalinity, Total as CaCO ₃	25.8	mg/L	5.0	1		02/10/21 14:12		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		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	

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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
6010D ATL ICP		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	
6020 MET ICPMS		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	
2540C Total Dissolved Solids		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		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	24.3	mg/L	5.0	1		02/10/21 14:19		
Alkalinity, Total as CaCO ₃	24.3	mg/L	5.0	1		02/10/21 14:19		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.8	mg/L	1.0	1		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
6010D ATL ICP		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	
6020 MET ICPMS		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	
2540C Total Dissolved Solids		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		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	24.2	mg/L	5.0	1		02/10/21 14:26		
Alkalinity, Total as CaCO ₃	24.2	mg/L	5.0	1		02/10/21 14:26		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.8	mg/L	1.0	1		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	

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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
6010D ATL ICP		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	
6020 MET ICPMS		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	
2540C Total Dissolved Solids		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		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	24.9	mg/L	5.0	1		02/10/21 14:33		
Alkalinity, Total as CaCO ₃	24.9	mg/L	5.0	1		02/10/21 14:33		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.7	mg/L	1.0	1		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
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.6	mg/L	0.20	1	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	
6020 MET ICPMS								
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	
2540C Total Dissolved Solids								
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		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	24.6	mg/L	5.0	1		02/10/21 14:53		
Alkalinity, Total as CaCO ₃	24.6	mg/L	5.0	1		02/10/21 14:53		
300.0 IC Anions 28 Days								
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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REPORT OF LABORATORY ANALYSIS

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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	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92520473001 Result	Spike Conc.	Spike Conc.	Result						
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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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 CaCO3	mg/L	ND	5.0	02/10/21 13:15	
Alkalinity, Bicarbonate (CaCO3)	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 CaCO3	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 CaCO3	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 CaCO3	mg/L	ND	50	50	50.1	50.1	100	100	80-120	0	25	

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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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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

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		

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:

Arcadis Atlanta

Project #:

WO#: 92520473

PM: MP

Due Date: 02/11/21

CLIENT: GA-ArcadAtl

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: THR214

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: _____



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