REPORT

2019 First Annual Groundwater Monitoring and Corrective Action Report

Georgia Power Company - Plant Branch
Ash Pond BCD

Submitted to:

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

Submitted by:

Golder Associates Inc.
5170 Peachtree Road Building 100 Suite 300, Atlanta, Georgia, USA 30341
+1 770 496-1893

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Certification Statement

This *2019 First 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 by a qualified groundwater scientist or engineer with Golder Associates Inc.

Golder Associates Inc.

Rachel P. Kirkman, PG
Georgia Registered Professional Geologist No. 1756

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 *2019 First Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document groundwater monitoring activities conducted at Georgia Power Company's (GPC's) 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. This report documents the activities completed to establish the groundwater monitoring program and actions through June 2019 in accordance with § 257.90(e) and Georgia EPD rule 391-3-4-.10(6)(a).

Plant Branch ceased producing electricity prior to April 2015. Therefore, Ash Ponds B, C, and D are 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.

1.1 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 being decommissioned. During its operation, five ash ponds were used for management of the CCR on the plant property. These ponds are identified as Ponds A, B, C, D, and E. Ash Pond A, the first ash pond constructed at the Site, was taken out of service in the late 1960's and was closed in April 2016 by the removal and relocation of its stored CCR to Ash Pond E. Ponds B, C, D, and E are currently inactive, and will be closed by removal by relocation of the stored CCR material to a proposed fully lined landfill located on the plant property. This report documents the groundwater monitoring program at the multi-unit AP-BCD.

1.2 Regional 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. 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 upper 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

As required by § 257.90(e) and 391-3-4-.10(6), the following section describes monitoring-related activities performed during the preceding year. Because this is the first Annual Groundwater Monitoring and Corrective Action Report, it also describes activities performed prior to June 2019 to establish the groundwater monitoring program. Groundwater sampling was performed in accordance with § 257.93 and 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.

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

In accordance with § 257.91 and 391-3-4-.10(6)(a)-(c), a groundwater monitoring system was installed that (1) consists of a sufficient number of wells, (2) installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) meets the performance standards of § 257.91(a). In summary, monitoring well related activities included the following:

- Installation of a groundwater monitoring system for AP-BCD. The monitoring well network and pertinent construction details is presented on Table 1.
- Installation of dedicated sampling equipment in many of the AP-BCD monitoring wells.

- Visual inspection of well conditions prior to sampling, recording the site conditions, and performing exterior maintenance to perform sampling under safe and clean conditions.
- Well redevelopment when well yield is reduced or turbid.

2.1.1 Background Monitoring

In accordance with § 257.94(b) and Georgia EPD rule 391-3-4-.10(6)(a), a minimum of eight (8) independent samples were collected from the monitoring well network for AP-BCD and analyzed for the constituents listed in Appendix III and IV of 40 CFR §257. Pursuant to § 257.90(e)(3), data reports for the background sampling are included in Appendix A, Analytical Results & Field Data Forms. Tables A-1 through A-12, Analytical Data Summary presents a tabulation of the background data for each well.

2.1.2 Initial Detection Monitoring

Following completion of the eight (8) independent sampling events, groundwater samples were collected in March 2019 and analyzed for Appendix III constituents as part of the first semi-annual detection monitoring event. Pursuant to § 257.90(e)(3), data reports for the March 2019 sampling event are included in Appendix A.

3.0 SAMPLE METHODOLOGY AND ANALYSIS

Sampling events completed during 2018 - 2019 for AP-BCD represent both background data collection and detection monitoring events. The March 2019 sampling event represents the first detection monitoring event for AP-BCD at Plant Branch.

3.1 Groundwater Elevation Measurement

Prior to each sampling event, groundwater elevations were recorded from the monitoring well network. Groundwater elevations are summarized in Table 3, Summary of Groundwater Elevations. The March 2019 elevation data were used to develop potentiometric surface elevation contour map (Figure 3, AP-BCD Potentiometric Surface Elevation Contour Map – March 2019). 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 4, Groundwater Flow Velocity Calculations – 2018/2019. 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:

Where:

V = Groundwater flow velocity

K = Average hydraulic conductivity of the aquifer $\left(\frac{feet}{day}\right)$

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

n_e = Effective porosity

Using this equation, groundwater flow velocities are calculated for various areas of the site and are tabulated on Table 4. Table 4 presents the velocities calculated using groundwater elevation data from the March 2019 sampling event.

As presented on Table 4 groundwater flow velocity at the site ranges from approximately 0.19 to 0.88 feet per day (or approximately 63 to 310 feet per year) across AP-BCD. These calculated groundwater flow velocities across the site are consistent with historical calculations. The observed groundwater flow velocities calculated for this monitoring event are also 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) and 391-3-4-.10(6). 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
- ±10% for DO where DO>0.5 mg/L; if DO<0.5 mg/L, no stabilization criteria apply
- Turbidity measurements less than 5 NTU

Any deviation from stabilization criteria, if applicable, is identified on field sampling forms. Following well stabilization, unfiltered samples were collected directly into appropriately preserved laboratory supplied sample containers, placed in iced coolers, and submitted to the laboratory following standard chain-of-custody protocol. Field information forms generated directly from the SmarTroll® as well as chain-of-custody records are included in Appendix A.

Where sample turbidity was greater than 5 NTU and all other stabilization criteria were met, samplers continued purging for up to 3 additional hours in order to reduce the turbidity to 5 NTU or less. When turbidity remained above 5 NTU but was less than 10 NTU, and all other parameters are stabilized, the well was sampled. Where turbidity remained above 10 NTU, an additional unfiltered sample was collected followed by a filtered sample that has passed through an in-line 0.45-micron filter attached to the discharge (sample collection) tube. The unfiltered sample data are used for compliance monitoring and in the statistical analysis database. Filtered sample data are used to assess the impacts of turbidity on groundwater quality. Additional details regarding filtered samples are recorded on the field information form and filtered samples are clearly identified as “filtered” on the laboratory reports.

3.4 Laboratory Analyses

Groundwater samples were collected for both Appendix III and Appendix IV parameters for background monitoring. Groundwater samples collected in March 2019 for detection monitoring event were analyzed for Appendix III monitoring parameters only. Analytical methods used for groundwater monitoring parameters can be found on the attached analytical data reports in Appendix A.

Laboratory analyses for background and detection 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 maintain a NELAP certification for all parameters analyzed for this project. NELAP certification for Pace from 2016 through 2019 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, 2011) 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. Where appropriate, validation qualifiers and flags are applied to the data using USEPA procedures as guidance (USEPA, 2017). Data validation summaries provided Environmental Standards and Golder are provided in Appendix A. Flagged data are identified in the statistical analysis reports described in the following section.

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.

4.1 Statistical Method

The selected statistical method for AP-BCD was developed in accordance with § 257.93(f) using methodology presented in Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009, USEPA 530/R-09-007 (Unified Guidance). The Sanitas™ Groundwater statistical software was used to perform the statistical analyses. Sanitas™ is a decision-support software package that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA Unified Guidance (2009) document.

Groundwater quality data were evaluated through use of interwell prediction limits for Appendix III parameters. Using this method, upgradient well data was pooled to establish a background statistical limit. Data from the March 2019 detection monitoring event are 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 initial finding is not verified by resampling, the resampled value replaced the initial finding. When the resample confirms the initial finding, both values remain in the database and 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.

Table 4.1.1 Plant Branch AP-BCD Statistical Method Summary provides a summary of the statistical methodology used at AP-BCD for the first detection monitoring conducted in March 2019 and will be used for any routine detection monitoring in the future.

Table 4.1.1 PLANT BRANCH AP-BCD STATISTICAL METHOD SUMMARY

Monitoring Well Network	Upgradient Wells	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
CCR Monitoring Parameters	Appendix III (Detection Monitoring)	Boron, Calcium, Chloride, Fluoride, pH, Sulfate, TDS
	Appendix IV (Assessment Monitoring)	Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, Thallium, Combined Radium (226+228)
	Data Screening on Proposed Background	Evaluate outliers, trends, and seasonality when sufficient data are available
	Statistical Limits	Interwell statistical limits will be applied on a constituent basis, depending on the appropriateness of the method as determined by the Analysis of Variance.
	Prediction Limits	Parametric when data follow a normal or transformed normal distribution and when less than 50% non-detects, utilizing Kaplan Meier non-detect adjustment when applicable; nonparametric when data sets contain greater than 50% non-detects or when data are not normally or transformed-normally distributed.
	Confidence Intervals	Used in Assessment and Corrective Action monitoring.
	No Statistical Testing	Statistical testing is not required for parameters with 100% non-detects.
	Verification Resample Plan	1-of-2 with minimum of 8 samples per well for interwell testing.
	Optional	▪ Initial statistical exceedance warrants independent resampling within 90 days. ▪ If resample passes, well/parameter is not a confirmed statistically significant increase (SSI). ▪ If resample exceeds, well/parameter has a confirmed SSI. ▪ If no resample is collected, the original result is deem verified.

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

- Statistical analyses are not performed on analytes containing 100% non-detects (USEPA 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.

4.2 Statistical Analysis Results

Analytical data from the first semi-annual detection monitoring event in March 2019 at AP-BCD have been statistically analyzed in accordance with the site's Statistical Analysis Plan. Verification resampling to confirm initial SSIs was not performed; therefore, initial SSIs are considered verified. The statistical results of the March 2019 monitoring event are included in Appendix B, Statistical Analyses.

Review of the Sanitas™ results presented in Table 4.2.1, AP-BCD Interwell Prediction Limit Statistically Significant Increase Summary and Appendix B indicates that the following verified SSIs were noted following the March 2019 sampling event:

Table 4.2.1 AP-BCD Inter-Well Prediction Limit Statistically Significant Increase Summary

Appendix III Parameter	AP-BCD Monitoring Wells
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-25I, BRGWC-32S, BRGWC-45, BRGWC-50, BRGWC-52I
Fluoride	No exceedances
pH	BRGWC-29I, BRGWC-50
Sulfate	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
Total Dissolved Solids	BRGWC-25I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-50, BRGWC-52I

Pursuant to § 257.94(e) and Georgia EPD rule 391-3-4-.10(6)(a), within 90 days from determining an SSI, GPC will either (1) prepare a demonstration that a source other than the AP-BCD was the cause, or (2) implement assessment monitoring per § 257.95 and Georgia EPD rule 391-3-4-.10(6)(a).

4.3 Appendix IV Background Data

Background data for Appendix IV constituents was completed concurrent with Appendix III background data collection. Pursuant to § 257.95 and Georgia EPD rule 391-3-4-.10(6)(a), Appendix IV groundwater quality data is

statistically analyzed and compared to groundwater protection standards if assessment monitoring is implemented. Plant Branch has completed detection monitoring per § 257.94 and Georgia EPD rule 391-3-4-.10(6)(a). As of June 2019, the site has not initiated assessment monitoring and therefore, statistical analysis of the Appendix IV data has not been performed.

5.0 MONITORING PROGRAM STATUS

Plant Branch AP-BCD is currently in detection monitoring. Table 2 presents the status of each well within the certified monitoring network for AP-BCD. SSIs of Appendix III parameters have been identified. GPC will address the reported SSIs in accordance with the requirements, and options, of § 257.94(e)(1-3) and (f) and 391-3-4-.10(6).

6.0 CONCLUSIONS AND FUTURE ACTIONS

This *2019 First Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Plant Branch AP-BCD* has been prepared to fulfill the requirements of Georgia EPD Rules of Solid Waste Management 391-3-4-.10(6).

Statistical evaluations of the groundwater monitoring data for AP-BCD identified SSIs of Appendix III groundwater monitoring parameters. In accordance with § 257.94(e)(1-2) and Georgia EPD rule 391-3-4-.10(6)(a), GPC will prepare an alternate source demonstration or initiate an assessment monitoring program within 90 days. The next scheduled sampling event is scheduled for August/September 2019.

7.0 REFERENCES

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Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA–2009–0640; FRL–9919–44– OSWER]. RIN–2050–AE81.

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Figures & Tables

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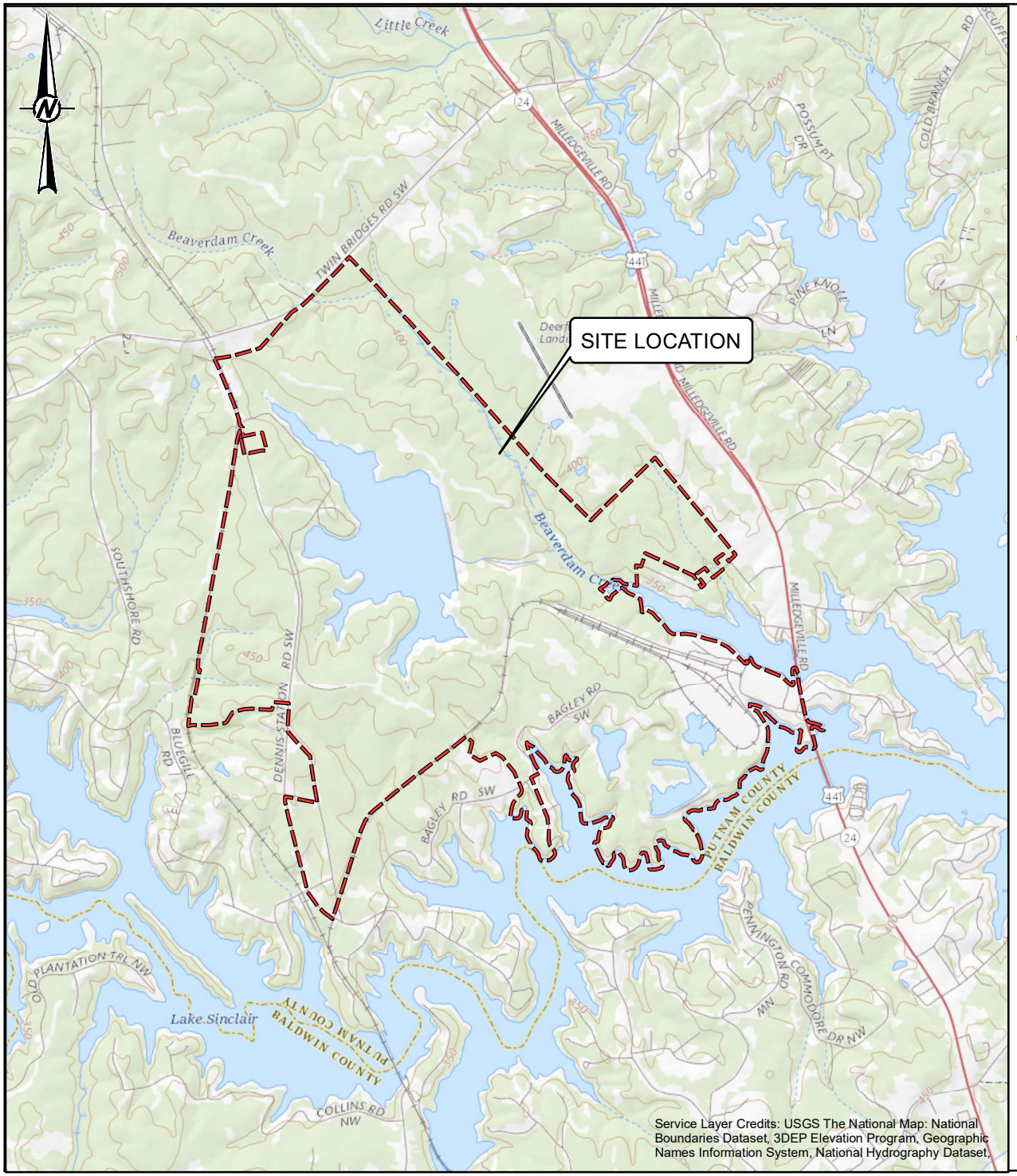

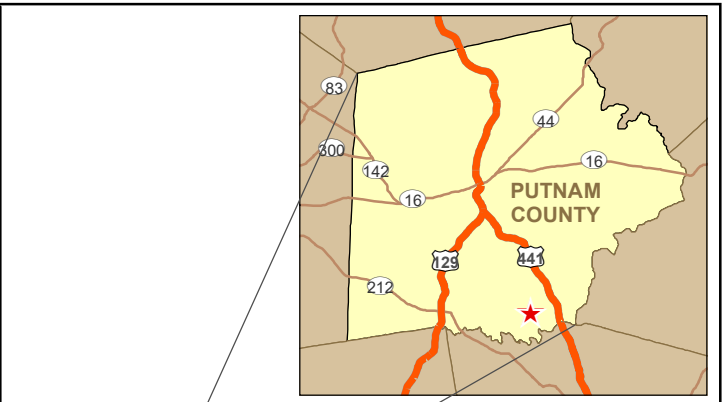

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GEORGIA POWER COMPANY
PLANT BRANCH

Georgia Power

PROJECT
GROUNDWATER MONITORING

TITLE
SITE LOCATION MAP

CONSULTANT
GOLDER

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

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LEGEND

- PROPERTY BOUNDARY
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS
- POND BCD MONITORING WELL
- PIEZOMETER

REFERENCE

1. SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).

3. BORING/PIEZOMETER LOCATIONS AND PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.

800 400 0 800
Feet

CLIENT
GEORGIA POWER COMPANY
PLANT BRANCH

Georgia Power

PROJECT
GROUNDWATER MONITORING PROGRAM

TITLE
SITE PLAN AND MONITORING WELL LOCATION MAP

CONSULTANT
GOLDER

YYYY-MM-DD	2019-05-30
PREPARED	DJC
DESIGN	DLP
REVIEW	dlp
APPROVED	rpk

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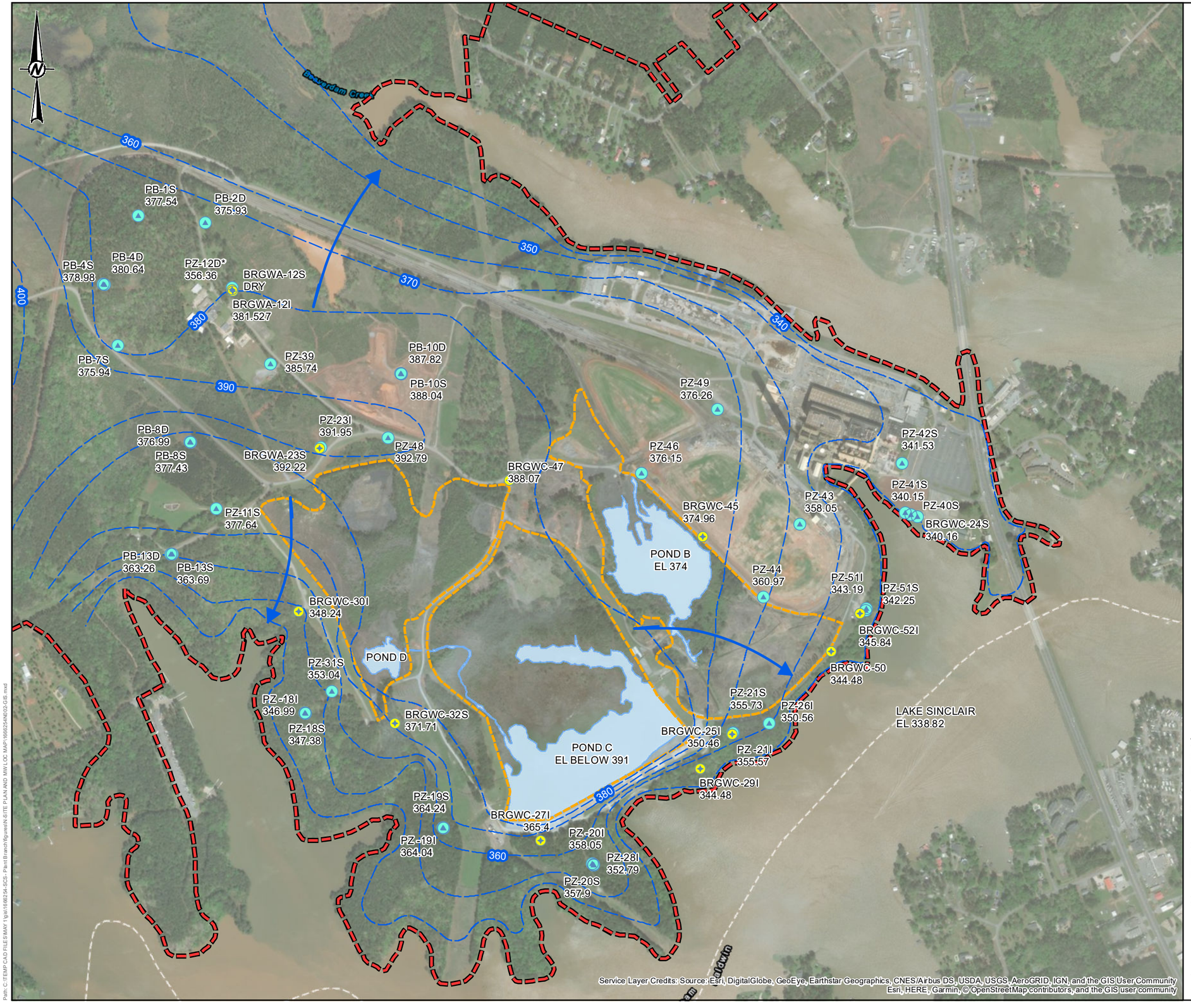

LEGEND

- ESTIMATED GROUNDWATER SURFACE CONTOUR (feet MSL)
- PROPERTY BOUNDARY
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS
- MONITORING WELL (ELEVATION feet AMSL)
- PIEZOMETER (ELEVATION feet AMSL)
- GROUNDWATER FLOW DIRECTION

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. PZ-12D* DATA NOT USED FOR CONTOURING.
4. AMSL=ABOVE MEAN SEA LEVEL.

REFERENCE

1. SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
3. BORING/PIEZOMETER LOCATIONS AND PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.

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Feet

CLIENT
GEORGIA POWER COMPANY
PLANT BRANCH

Georgia Power

PROJECT
GROUNDWATER MONITORING PROGRAM

TITLE
POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP
MARCH 19, 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2019-06-26
PREPARED	DJC
DESIGN	DLP
REVIEW	dlp
APPROVED	rpk

PROJECT No. 166625418 | CONTROL 1666254N002-GIS.mxd | Rev. 0 | FIGURE 3

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TABLE 1
MONITORING WELL NETWORK SUMMARY (AP-BCD)
Georgia Power - Plant Branch
Milledgeville, GA

Well-ID	Old Well-ID	Location	Geologic Unit Screened [3]	Latitude	Longitude	Ground Surface Elevation (feet msl)[1]	Top of Casing Elevation (feet msl)[1]	Total Depth (feet bgs)[2]	Top of Screen Elevation (feet msl)[1]	Screen Tip Elevation (feet msl)[1]	Screen Length	Date of Installation
POND BCD												
BRGWA-12S	PZ-12S	Upgradient ABCD	Saprolite	33.197933	-83.314864	436.31	439.69	58.3	388.01	378.01	10.0	3/4/2014
BRGWA-12I	PZ -12I	Upgradient ABCD	Biotote gneiss	33.197975	-83.314876	436.18	439.43	77.6	368.58	358.58	10.0	2/20/2014
BRGWA-23S	PZ-23S	Upgradient ABCD	Saprolite/TWR	33.194309	-83.312529	425.5	428.42	40.8	394.70	384.70	10.0	7/26/2016
BRGWC-25I	PZ-25I	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.187674	-83.301326	354.95	357.46	21.0	344.45	334.45	10.0	7/25/2016
BRGWC-27I	PZ-27S	Downgradient C	Saprolite	33.185268	-83.306586	364.88	367.99	24.0	350.88	340.88	10.0	7/22/2016
BRGWC-29I	PZ-29I	Downgradient C	TWR	33.186893	-83.302200	350.37	353.30	21.0	340.37	330.37	10.0	7/23/2016
BRGWC-30I	PZ-30I	Downgradient D	Saprolite/TWR/Biotite Gneiss	33.190567	-83.313139	349.78	352.33	20.3	339.78	329.78	10.0	7/18/2016
BRGWC-32S	PZ-32S	Downgradient D	Saprolite	33.187995	-83.310532	403.51	406.51	45.0	368.51	358.51	10.0	7/20/2016
BRGWC-45	PZ-45	Downgradient B	Saprolite/TWR	33.192198	-83.302067	381.69	384.61	57.0	335.09	325.09	10.0	2/3/2018
BRGWC-47	PZ-47	Downgradient D	TWR	33.193531	-83.307344	408.87	411.32	97.0	327.27	317.27	10.0	1/25/2018
BRGWC-50	PZ-50	Downgradient B	TWR/Biotite Gneiss	33.190422	-83.297844	387.79	381.53	67.0	324.19	314.19	10.0	1/31/2018
BRGWC-52I	PZ-52	Downgradient B	Biotite Gneiss	33.189552	-83.298596	380.93	383.83	75.0	317.03	307.03	10.0	8/6/2018

Notes:
1. feet msl = feet mean sea level
2. feet bgs = feet below ground surface
3. TWR = Transitionally Weathered Rock

GOLDER

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-September 2016	November 2016	February-March 2017	June 2017	September 2017	February 2018	March 2018	May 2018	June 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection	
ASH PONDS B, C, and D (AP-BCD)																			
BRGWA-12S	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWA-12I	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWA-23S	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWC-25I	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWC-27I	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWC-29I	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWC-30I	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection
BRGWC-32S	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	--	--	BG07	--	--	--	--	BG08	--	--	D01	Detection

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-September 2016	November 2016	February-March 2017	June 2017	September 2017	February 2018	March 2018	May 2018	June 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection	
ASH PONDS B, C, and D (AP-BCD)																			
BRGWC-45	Downgradient	--	--	--	--	--	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	--	D01	Detection
BRGWC-47	Downgradient	--	--	--	--	--	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	--	D01	Detection
BRGWC-50	Downgradient	--	--	--	--	--	--	BG01	BG02	BG03	BG04	--	BG05	BG06	BG07	BG08	--	D01	Detection
BRGWC-52I	Downgradient	--	--	--	--	--	--	--	--	--	BG01/02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection

Notes:

BG## = Background Event Number

D## = Detection Event Number

GOLDER

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

Well-ID	Top of Casing Elevation (feet msl)[1]	GROUNDWATER ELEVATIONS (FEET MSL)										
		8/30/2016	11/21/2016	2/17/2017	6/12/2017	9/25/2017	2/7/2018	2/13/2018	6/25/2018	9/18/2018	12/17/2018	3/18/2019
POND BCD												
BRGWA-12S	439.69	391.26	341.94	389.54	388.88	388.42	387.14	387.43	387.01	DRY	386.87	DRY
BRGWA-12I	439.43	390.64	341.60	389.57	388.80	388.47	425.03	387.40	386.99	386.50	386.14	381.53
BRGWA-23S	428.42	395.74	361.06	394.05	392.90	392.61	390.71	390.74	390.08	389.57	389.28	392.22
BRGWC-25I	357.46	348.30	338.59	349.86	349.53	349.01	349.60	349.75	348.57	347.66	349.45	350.46
BRGWC-27I	367.99	363.35	357.29	364.60	364.91	364.63	364.40	364.23	362.54	360.67	362.95	365.40
BRGWC-29I	353.30	343.46	333.29	344.15	344.30	343.72	343.73	344.06	343.48	343.05	343.94	344.48
BRGWC-30I	352.33	347.85	343.69	348.42	348.13	348.36	348.11	348.16	347.63	347.61	348.09	348.24
BRGWC-32S	406.51	372.01	335.50	370.37	371.86	372.10	371.12	371.05	370.65	369.37	368.58	371.71
BRGWC-45	384.61	NA	NA	NA	NA	NA	373.67	373.55	374.86	372.77	374.49	374.96
BRGWC-47	411.32	NA	NA	NA	NA	NA	385.72	385.59	385.68	384.27	384.52	388.07
BRGWC-50	381.53	NA	NA	NA	NA	NA	343.47	346.10	343.70	343.45	343.73	344.48
BRGWC-52I	383.83	NA	NA	NA	NA	NA	NA	NA	NA	344.6	344.9	345.84
POND E												
BRGWA-2S	458.02	439.6	419.5	442.40	443.20	442.31	443.65	443.75	442.82	440.63	443.97	445.12
BRGWA-2I	457.85	439.7	419.6	442.15	443.00	442.14	443.45	443.61	442.74	440.63	443.67	445.00
BRGWA-5S	448.53	436.0	422.5	436.76	436.18	435.44	435.91	435.87	436.30	435.22	436.42	438.23
BRGWA-5I	448.44	435.9	422.5	436.74	436.17	435.49	435.91	435.86	436.32	435.24	436.42	438.24
BRGWA-6S	463.63	438.5	411.0	439.65	437.92	437.74	435.11	437.60	438.12	436.36	438.74	441.74
BRGWC-17S	370.25	364.7	358.8	364.60	364.17	364.11	364.05	364.39	363.66	363.95	364.52	364.13
BRGWC-33S	416.92	408.7	400.9	410.10	409.30	408.84	409.32	409.39	409.35	408.87	410.39	410.59
BRGWC-34S	392.06	389.3	386.7	389.68	389.52	389.36	389.59	389.67	389.32	389.36	389.80	389.73
BRGWC-35S	366.54	364.4	362.2	364.44	364.40	364.34	364.44	364.51	364.39	364.37	364.79	364.75
BRGWC-36S	386.00	384.3	382.4	384.20	383.94	383.80	383.42	383.47	383.30	383.30	383.64	383.75
BRGWC-37S	447.23	400.6	352.9	398.18	399.72	396.98	395.84	395.82	395.88	395.79	395.33	397.01
BRGWC-38S	432.33	412.2	391.0	413.61	412.05	411.47	411.78	411.69	412.15	410.79	412.53	413.93

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

Well-ID	Top of Casing Elevation (feet msl)[1]	GROUNDWATER ELEVATIONS (FEET MSL)										
		8/30/2016	11/21/2016	2/17/2017	6/12/2017	9/25/2017	2/7/2018	2/13/2018	6/25/2018	9/18/2018	12/17/2018	3/18/2019
PIEZOMETERS												
PZ-1S	470.22	431.8	392.5	430.72	431.72	431.53	431.25	431.12	432.68	NA	432.04	434.45
PZ-1I	469.85	431.4	391.9	430.16	431.11	430.22	430.47	430.53	431.88	NA	431.19	433.56
PZ-1D	468.56	429.1	389.1	428.71	429.58	429.30	429.13	429.05	430.39	NA	429.93	432.13
PZ-3S	494.63	DRY	DRY	DRY	451.05	451.09	DRY	DRY	DRY	NA	DRY	DRY
PZ-3I	493.60	469.4	418.1	441.46	440.69	440.11	439.38	439.54	439.21	NA	439.00	438.86
PZ-3D	491.59	442.1	393.5	441.91	441.55	441.18	440.60	440.76	440.36	NA	440.09	440.04
PZ-4S	487.08	DRY	DRY	DRY	451.90	433.88	DRY	DRY	DRY	NA	DRY	DRY
PZ-4I	487.22	451.6	414.6	449.32	449.23	449.01	449.90	449.61	450.89	NA	451.14	453.22
PZ-7S	456.87	429.6	400.0	428.15	428.69	427.97	428.24	428.03	429.93	NA	429.46	432.79
PZ-8S	457.37	428.4	397.4	429.74	430.30	429.89	431.33	431.15	431.38	NA	431.13	433.43
PZ-9S	474.02	438.9	402.8	437.06	436.32	435.67	434.42	434.50	451.84	NA	433.48	434.89
PZ-10S	438.95	412.3	384.5	412.83	411.85	411.41	411.31	411.24	411.72	NA	411.87	413.17
PZ-11S	398.97	381.1	361.6	381.14	379.68	378.74	377.73	377.46	376.47	NA	375.11	377.64
PZ-12D	439.17	361.2	282.0	362.18	359.97	351.36	349.45	348.93	360.34	NA	355.20	356.36
PZ-13S	415.13	387.0	356.7	387.14	387.37	386.42	387.03	386.92	388.25	NA	387.62	390.76
PZ-14S	435.51	415.5	395.8	418.16	417.20	416.53	417.17	417.24	417.41	NA	418.68	419.11
PZ-14I	434.91	416.3	397.8	416.78	417.26	416.76	417.37	417.55	417.12	NA	417.49	418.15
PZ-15S	415.77	405.6	395.7	406.37	406.08	405.88	406.21	406.36	405.82	NA	406.52	406.51
PZ-15I	415.90	406.1	396.6	406.86	406.56	406.36	406.70	406.82	406.34	NA	407.01	407.02
PZ-16S	386.97	373.9	360.6	375.04	374.59	374.20	374.84	374.99	374.43	NA	370.39	375.97
PZ-16I	386.89	374.0	360.7	375.12	374.66	374.25	374.90	375.09	374.49	NA	375.45	376.05
PZ-17I	370.07	366.4	362.8	367.34	366.98	366.57	366.95	367.27	366.44	NA	367.33	367.48
PZ-18S	367.27	346.6	325.1	347.09	346.99	346.53	346.86	346.85	346.43	NA	346.72	347.38
PZ-18I	366.75	346.2	324.9	346.71	346.92	346.19	346.47	346.51	346.07	NA	346.38	346.99
PZ-19S	376.31	360.3	342.6	361.89	362.04	361.15	362.41	362.33	361.13	NA	359.91	364.24
PZ-19I	376.73	360.1	341.8	361.69	362.02	362.24	362.20	362.09	360.95	NA	359.77	364.04
PZ-20S	370.71	355.1	339.1	357.44	356.69	356.17	356.68	356.79	355.46	NA	356.84	357.90
PZ-20I	370.64	355.3	339.6	357.63	356.89	356.35	356.86	356.97	355.63	NA	357.03	358.05
PZ-21S	363.60	353.4	342.7	355.09	354.71	354.22	354.81	354.99	353.73	NA	354.64	355.73

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

Well-ID	Top of Casing Elevation (feet msl)[1]	GROUNDWATER ELEVATIONS (FEET MSL)										
		8/30/2016	11/21/2016	2/17/2017	6/12/2017	9/25/2017	2/7/2018	2/13/2018	6/25/2018	9/18/2018	12/17/2018	3/18/2019
PIEZOMETERS												
PZ-21I	363.97	353.3	342.1	354.93	354.57	354.05	354.67	354.84	353.56	NA	354.49	355.57
PZ-23I	427.90	395.2	361.0	393.75	392.87	392.40	390.70	388.76	390.02	NA	389.17	391.95
BRGWC-24S	354.00	339.5	324.6	339.81	340.08	339.76	339.93	340.10	339.79	339.36	NA	340.16
PZ-26I	370.93	348.6	325.4	349.21	349.02	348.82	349.09	348.98	348.83	NA	348.95	350.56
PZ-28I	364.88	350.0	334.7	352.36	351.62	351.06	351.58	351.73	350.36	NA	351.76	352.79
PZ-31S	376.94	352.8	326.9	352.38	352.42	352.12	352.16	352.13	351.77	NA	350.81	353.04
PZ-39	434.70	388.3	340.3	385.77	DRY	385.79	385.76	385.77	385.77	NA	385.75	385.74
PZ-40S	356.06	NA	NA	340.18	340.33	340.11	340.17	340.25	340.66	339.80	NA	340.56
PZ-41S	357.23	NA	NA	340.13	340.22	340.07	340.10	340.15	340.04	339.77	NA	340.50
PZ-42S	361.69	NA	NA	340.90	340.40	340.58	340.45	340.66	341.06	340.75	NA	341.53
PZ-43	383.75	NA	NA	NA	NA	NA	353.02	NA	353.78	NA	353.75	358.05
PZ-44	383.12	NA	NA	NA	NA	NA	358.14	NA	358.83	NA	358.90	360.97
PZ-46	384.70	NA	NA	NA	NA	NA	375.58	375.61	375.52	NA	376.09	376.15
PZ-48	421.05	NA	NA	NA	NA	NA	390.41	390.37	390.09	NA	390.14	392.79
PZ-49	385.06	NA	NA	NA	NA	NA	377.17	380.58	376.47	NA	376.85	376.26
PZ-51S	380.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	341.6	342.25
PZ-51I	380.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	342.5	343.19
Temporary Landfill Piezometers												
PB-1S	403.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	377.54
PB-2D	416.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	375.93
PB-4S	411.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	378.98
PB-4D	412.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	380.64
PB-7S	402.86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	375.94
PB-8S	401.69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	377.43
PB-8D	401.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	376.99
PB-10S	400.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	388.04
PB-10D	400.33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	387.82
PB-13S	373.38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	363.69
PB-13D	373.83	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	363.26

Note: feet msl = feet mean sea level

GOLDER

TABLE 4
GROUNDWATER VELOCITY CALCULATIONS - 2018/2019
Georgia Power - Plant Branch Ash Pond AP-BCD
Milledgeville, GA

Flow Paths	Groundwater Elevation (feet msl)	Δ h (feet)[1]	Δ l (feet)[2]	Hydraulic Gradient (Δ h/Δ l)	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 E February 13, 2018								
BRGWA-23S / BRGWC-30I	390.74 348.16	42.58	1374.0	0.0310	2.73 to 5.47	0.2	0.42 to 0.85	154.4 to 309.4
BRGWC-47 / BRGWC-50	385.59 346.10	39.49	3130.0	0.013	2.73 to 5.47	0.2	0.17 to 0.35	62.9 to 125.9
Pond E September 18, 2018								
BRGWA-23S / BRGWC-30I	389.57 347.61	41.96	1374.0	0.031	2.73 to 5.47	0.2	0.42 to 0.84	152.2 to 304.9
BRGWC-47 / BRGWC-50	384.27 343.45	40.82	3130.0	0.013	2.73 to 5.47	0.2	0.18 to 0.36	65.0 to 130.2
Pond BCD March 18, 2019								
BRGWA-23S / BRGWC-30I	392.22 348.24	43.98	1374.0	0.032	2.73 to 5.47	0.2	0.44 to 0.88	159.5 to 319.5
BRGWC-47 / BRGWC-50	388.07 344.48	43.59	3130.0	0.014	2.73 to 5.47	0.2	0.19 to 0.38	69.4 to 139.0

Notes:

1. Δ H = Change in groundwater elevation.
2. Δ L = Distance along flow path.
3. I = Δ H / Δ 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)

GOLDER

APPENDIX A

Analytical Data Summary, Analytical Results, Field Data Forms & Data Validation Summaries

APPENDIX A

Laboratory Analytical Data & Field Data Forms

Table A-1
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWA-12S							
			9/1/2016	11/16/2016	2/21/2017	6/13/2017	9/26/2017	2/14/2018	6/26/2018	12/18/2018
APPENDIX III	Boron	N/R	ND	ND (0.0081 J)	ND	ND	ND	ND	ND	ND (0.0053 J)
	Calcium	N/R	4.61	4.17	5.00	4.98	4.49	ND	6.4	5.5
	Chloride	(250)	3.5	3.6	3.2	3.3	3.3	3.5	3.4	2.9
	Fluoride	4	ND (0.05 J)	ND (0.03 J)	ND (0.04 J)	ND (0.008 J)	ND	ND	ND (0.042 J)	ND
	Sulfate	(250)	1.7	1.2	1.1	1.1	1.3	ND	ND (0.84 J)	ND (0.66 J)
	TDS	(500)	69	100	37	84	68	138	90	85
APPENDIX IV	Antimony	0.006	ND	ND (0.0011 J)	ND	ND (0.0009 J)	0.0032	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.0006 J)	ND	ND	ND
	Barium	2	0.0528	0.0509	0.0531	0.0543	0.0547	0.0603	0.059	0.056
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0013 J)	ND (0.0012 J)	ND (0.0017 J)	ND (0.0019 J)	ND (0.0018 J)	ND	ND (0.0022 J)	ND (0.0022 J)
	Cobalt	0.006*	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015*	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	0.04*	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	0.1*	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.643 U	0.863 U	0.318 U	0.163 U	0.560 U	0.537 U	1.31	1.31
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-2
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWA-12I							
			9/1/2016	11/16/2016	2/21/2017	6/14/2017	9/26/2017	2/14/2018	6/26/2018	12/18/2018
APPENDIX III	Boron	N/R	ND (0.0093 J)	ND (0.0127 J)	ND (0.0071 J)	ND (0.0078 J)	ND	ND (0.0068 J)	ND (0.0080 J)	ND (0.0083 J)
	Calcium	N/R	8.98	15.4	17.4	18.1	19.3	ND	ND (15.5 J)	ND (18.7 J)
	Chloride	(250)	3.3	3.6	3.2	3.1	3.3	3.1	3.4	2.8
	Fluoride	4	ND (0.20 J)	ND (0.14 J)	ND (0.16 J)	ND (0.09 J)	ND (0.10 J)	ND	ND (0.079 J)	ND
	Sulfate	(250)	2.7	3.6	3.0	2.6	2.5	2.1	2	2.1
	TDS	(500)	142	100	71	140	149	137	142	135
APPENDIX IV	Antimony	0.006	ND (0.0015 J)	ND	ND	ND (0.0014 J)	ND	ND	ND	0.009
	Arsenic	0.01	ND	ND	ND	ND (0.0009 J)	ND (0.0012 J)	ND	ND	ND
	Barium	2	0.0454	0.0623	0.0644	0.0726	0.0765	0.0786	0.063	0.067
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0009 J)	ND (0.0015 J)	ND (0.0010 J)	ND (0.0012 J)	ND (0.0014 J)	ND	ND	ND (0.0016 J)
	Cobalt	0.006*	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015*	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	0.04*	ND (0.0061 J)	ND (0.0054 J)	ND (0.0058 J)	ND (0.0054 J)	ND (0.0037 J)	ND (0.0038 J)	ND (0.0045 J)	ND (0.0038 J)
	Mercury	0.002	ND	ND	ND	ND (0.00006 J)	ND	ND (0.000052 J)	ND	ND
	Molybdenum	0.1*	ND (0.0020 J)	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.18	0.799 U	1.75 U	2.66	0.841 U	1.13	1.42	0.855 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-3
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWA-23S							
			9/6/2016	11/17/2016	2/21/2017	6/13/2017	9/26/2017	2/14/2018	6/26/2018	12/18/2018
APPENDIX III	Boron	N/R	ND (0.0362 J)	0.0617	ND (0.0245 J)	ND	ND	ND (0.0314 J)	0.062	0.055
	Calcium	N/R	12.8	19.2	15.1	10.2	15.0	ND	ND (18.5 J)	ND (16.8 J)
	Chloride	(250)	5.8	4.3	3.5	3.2	3.5	3.8	3.8	3.9
	Fluoride	4	0.42	ND (0.15 J)	ND (0.10 J)	ND (0.07 J)	ND	ND	ND (0.053 J)	ND
	Sulfate	(250)	38	84	39	35	89	82.2	84.2	83.4
	TDS	(500)	146	211	151	130	160	194	221	208
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND (0.0020 J)	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0008 J)	ND (0.0012 J)	ND (0.0007 J)	ND (0.00062 J)	ND
	Barium	2	0.0624	0.109	0.0950	0.0861	0.104	0.129	0.13	0.13
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND (0.00015 J)	ND (0.0001 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	0.006*	ND (0.0028 J)	ND (0.0072 J)	ND (0.0045 J)	ND (0.0036 J)	ND (0.0037 J)	0.0135	ND (0.0098 J)	ND (0.0057 J)
	Lead	0.015*	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	0.04*	ND (0.0028 J)	ND (0.0063 J)	ND (0.0052 J)	ND (0.0061 J)	ND (0.0087 J)	ND (0.0104 J)	ND (0.0095 J)	ND (0.0091 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	0.1*	ND (0.0028 J)	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.585 U	0.804 U	0.545 U	0.618 U	1.26 U	1.20 U	1.34 U	1.13 U
	Selenium	0.05	ND	ND (0.0052 J)	ND (0.0018 J)	ND	ND	ND	ND (0.0036 J)	ND (0.0044 J)
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

Table A-4
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-25I							
			9/8/2016	11/17/2016	2/21/2017	6/13/2017	9/27/2017	2/14/2018	6/26/2018	12/18/2018
APPENDIX III	Boron	N/R	1.03	1.70	1.55	1.77	1.75	1.47	1.8	1.5
	Calcium	N/R	59.4	78.4	80.9	62.0	65.8	58.8	55.5	54.7
	Chloride	(250)	5.5	7.7	7.3	7.5	7.9	6.7	6.7	6.2
	Fluoride	4	ND (0.14 J)	ND (0.27 J)	0.60	ND (0.19 J)	0.50	ND	ND (0.15 J)	ND (0.29 J)
	Sulfate	(250)	280	200	360	290	310	260	231	231
	TDS	(500)	460	611	497	474	457	431	414	401
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0006 J)	ND	ND	ND (0.00072 J)	ND (0.00091 J)
	Barium	2	0.0378	0.0448	0.0447	0.0351	0.0383	0.0327	0.031	0.03
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	0.006*	ND (0.0073 J)	ND (0.0086 J)	ND (0.0079 J)	ND (0.0083 J)	ND (0.0087 J)	ND	ND (0.0060 J)	ND (0.0055 J)
	Lead	0.015*	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	0.04*	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND (0.00004 J)	ND	ND	ND
	Molybdenum	0.1*	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.471 U	1.20 U	1.31	0.738 U	0.583 U	1.41	0.968 U	1.13 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-5
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-27I							
			9/8/2016	11/18/2016	2/21/2017	6/13/2017	9/27/2017	2/14/2018	6/27/2018	12/20/2018
APPENDIX III	Boron	N/R	1.63	1.91	1.39	1.62	1.16	1.17	1.4	1.4
	Calcium	N/R	87.2	82.4	75.1	61.0	72.6	74.1	68.2	63.9
	Chloride	(250)	6.0	6.3	5.1	4.7	4.9	5.6	5.9	5.6
	Fluoride	4	0.31	ND (0.19 J)	0.35	ND (0.19 J)	0.40	ND	ND (0.26 J)	ND (0.26 J)
	Sulfate	(250)	300	320	270	230	260	232	205	200
	TDS	(500)	478	503	380	354	376	503	458	344
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0009 J)	ND (0.0007 J)	ND	ND	ND
	Barium	2	0.0184	0.0173	0.0150	0.0143	0.0170	0.0166	0.015	0.015
	Beryllium	0.004	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0001 J)	ND	ND (0.00014 J)	ND (0.00012 J)
	Cadmium	0.005	ND (0.00007 J)	ND (0.000090 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0010 J)	ND	ND	ND	ND	ND	ND	ND (0.003 J)
	Cobalt*	0.006	0.0149	0.0131	ND (0.0099 J)	ND (0.0094 J)	ND ('0.0095 J)	0.0112	ND (0.0093 J)	ND (0.0081 J)
	Lead*	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium*	0.04	ND (0.0021 J)	ND	ND	ND (0.0017 J)	ND (0.0016 J)	ND (0.0018 J)	ND (0.0016 J)	ND (0.0015 J)
	Mercury	0.002	ND	ND	ND	ND (0.00005 J)	ND (0.000047 J)	ND	ND	ND
	Molybdenum*	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.74	0.571 U	1.28 U	0.521 U	0.595 U	1.18 U	1.30 U	0.527 U
	Selenium	0.05	ND (0.0043 J)	ND (0.0047 J)	ND (0.0025 J)	ND (0.0036 J)	ND (0.0040 J)	ND	ND (0.0014 J)	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. * Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-6
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-29I							
			9/8/2016	11/21/2016	2/22/2017	6/14/2017	9/27/2017	2/14/2018	6/27/2018	12/18/2018
APPENDIX III	Boron	N/R	1.35	1.74	1.50	1.60	1.83	1.8	1.8	1.5
	Calcium	N/R	93.9	99.1	105	91.3	84.0	72.1	61.1	52.9
	Chloride	(250)	6.4	6.9	6.2	7.2	8.7	7.2	6.3	5.4
	Fluoride	4	ND (0.20 J)	0.37	0.37	0.38	0.40	ND	ND (0.085 J)	ND (0.26 J)
	Sulfate	(250)	460	500	570	440	380	280	281	293
	TDS	(500)	654	819	721	661	518	487	648	407
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND (0.0007 J)	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0019 J)	ND	ND (0.0020 J)	ND (0.0016 J)	ND	ND	ND
	Barium	2	0.0199	ND (0.0221 J)	0.0179	0.0157	0.0165	0.0163	0.017	0.017
	Beryllium	0.004	ND (0.0011 J)	ND (0.0012 J)	ND (0.0014 J)	ND (0.0012 J)	ND (0.0010 J)	ND	ND (0.00080 J)	ND (0.00071 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt*	0.006	0.0122	0.0122	0.0136	0.0113	ND (0.0094 J)	ND	ND (0.0069 J)	ND (0.0067 J)
	Lead*	0.015	ND (0.0004 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0004 J)	ND (0.0006 J)	ND	ND (0.00032 J)	ND (0.00038 J)
	Lithium*	0.04	ND (0.0040 J)	ND (0.0039 J)	ND (0.0043 J)	ND (0.0036 J)	ND (0.0038 J)	ND (0.0034 J)	ND (0.0034 J)	ND (0.0032 J)
	Mercury	0.002	ND	ND	ND	ND (0.00007 J)	ND (0.00004 J)	ND	ND	ND
	Molybdenum*	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.540 U	1.59	1.64	1.32	1.70	1.89	1.66	0.759 U
	Selenium	0.05	ND (0.0039 J)	ND (0.0058 J)	ND (0.0050 J)	ND (0.0074 J)	ND (0.0068 J)	ND	ND	ND
	Thallium	0.002	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00018 J)	ND (0.00017 J)	ND (0.00017 J)

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-7
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-30I							
			9/6/2016	11/21/2016	2/22/2017	6/14/2017	9/27/2017	2/14/2018	6/28/2018	12/18/2018
APPENDIX III	Boron	N/R	1.96	1.68	1.48	1.71	1.61	1.47	1.4	1.6
	Calcium	N/R	63.3	60.7	62.1	63.5	63.5	62.8	73.3	102
	Chloride	(250)	6.7	6.5	5.6	5.7	6.0	5.9	7.0	5.8
	Fluoride	4	0.43	ND (0.24 J)	ND (0.20 J)	ND (0.15 J)	0.41	ND	0.93	0.54
	Sulfate	(250)	310	300	280	290	260	250	276	440
	TDS	(500)	505	515	504	536	432	448	494	715
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.00073 J)	ND
	Barium	2	0.0206	ND (0.0237 J)	0.0219	0.0197	0.0213	0.0236	0.023	0.029
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND (0.00008 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt*	0.006	ND (0.0006 J)	ND	ND (0.0016 J)	ND (0.0015 J)	ND (0.0007 J)	ND	ND (0.00078 J)	ND (0.0011 J)
	Lead*	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium*	0.04	ND (0.0117 J)	ND (0.0108 J)	ND (0.0103 J)	ND (0.0101 J)	ND (0.0116 J)	ND (0.0115 J)	ND (0.013 J)	ND (0.014 J)
	Mercury	0.002	ND	ND	ND	ND (0.00007 J)	ND (0.00004 J)	ND	ND	ND
	Molybdenum*	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.01 U	0.201 U	0.570 U	0.726 U	0.884 U	1.14 U	1.40	0.661 U
	Selenium	0.05	ND	ND	ND	ND (0.0045 J)	ND (0.0034 J)	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-8
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-32S							
			9/8/2016	11/21/2016	2/22/2017	6/14/2017	9/27/2017	2/14/2018	6/27/2018	12/19/2018
APPENDIX III	Boron	N/R	1.28	1.19	1.43	1.57	1.51	1.6	1.5	1.6
	Calcium	N/R	60.5	31.1	67.3	60.2	68.4	70.2	67.1	ND (61.2 J)
	Chloride	(250)	6.8	7.8	7.0	7.1	7.2	7.4	7.1	7
	Fluoride	4	ND (0.15 J)	ND (0.04 J)	ND (0.08 J)	ND (0.09 J)	ND	ND	ND	ND (0.23 J)
	Sulfate	(250)	370	420	380	400	400	383	372	370
	TDS	(500)	607	695	635	635	601	628	2280	605
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0593	0.0532	0.0498	0.0421	0.0411	0.0417	0.038	0.036
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND (0.00008 J)	ND (0.0001 J)	ND	ND	ND	ND (0.00011 J)	ND (0.00012 J)
	Chromium	0.1	ND	ND	ND (0.0012 J)	ND (0.0009 J)	ND (0.0011 J)	ND	ND	ND
	Cobalt*	0.006	ND (0.0025 J)	ND (0.0010 J)	ND	ND	ND	ND	ND	ND
	Lead*	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium*	0.04	ND	ND	ND (0.0023 J)	ND (0.0022 J)	ND (0.0021 J)	ND (0.0023 J)	ND (0.0023 J)	ND (0.0018 J)
	Mercury	0.002	ND	ND	ND	ND (0.00009 J)	ND (0.00010 J)	ND	ND	ND
	Molybdenum*	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.816 U	0.0569 U	1.07 U	0.459 U	0.807 U	1.67	1.34	1.21 U
	Selenium	0.05	ND	ND	ND (0.0017 J)	ND	ND (0.0019 J)	ND	ND (0.0017 J)	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-9
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-45							
			3/6/2018	5/1/2018	6/28/2018	8/23/2018	9/19/2018	10/29/2018	11/28/2018	12/20/2018
APPENDIX III	Boron	N/R	ND (0.0198 J)	ND (0.015 J)	ND (0.025 J)	ND (0.022 J)	ND (0.021 J)	ND (0.021 J)	ND (0.026 J)	ND (0.028 J)
	Calcium	N/R	39.5	45.5	41.9	42.3	41.9	40.8	45.1	39
	Chloride	(250)	56.6	58.5	50.2	54	58.4	62.6	58.1	47.2
	Fluoride	4	0.94	ND	0.69	ND (0.022 J)	ND	ND	ND	ND (0.12 J)
	Sulfate	(250)	111	112	109	108	117	127	133	113
	TDS	(500)	346	374	333	350	353	329	358	322
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND (0.022 J)	ND	ND	ND	ND (0.0024 J)
	Arsenic	0.01	ND (0.0018 J)	ND (0.0021 J)	ND (0.0017 J)	ND (0.00075 J)	ND	ND	ND (0.00096 J)	ND
	Barium	2	0.10	0.084	0.067	0.0840	0.086	0.098	0.11	0.093
	Beryllium	0.004	ND	ND	ND	ND (0.000079 J)	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND (0.000098 J)	ND	ND (0.00029 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt*	0.006	0.0162	0.015	0.010	ND (0.0093 J)	ND (0.0084 J)	ND (0.0064 J)	ND (0.0071 J)	0.069
	Lead*	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium*	0.04	ND (0.0031 J)	ND (0.0038 J)	ND (0.0028 J)	ND (0.0033 J)	ND (0.0033 J)	ND (0.003 J)	ND (0.0035 J)	ND (0.003 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum*	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.25 U	0.423 U	0.283 U	1.10 U	0.369 U	0.401 U	pending	0.657 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Monitoring well BRGWC-45 was originally installed and sampled as PZ-45. Analytical reports may refer to either PZ-45 or BRGWC-45. They should be considered interchangeable
11. * Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-10
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-47							
			3/6/2018	5/1/2018	6/27/2018	8/23/2018	9/19/2018	10/29/2018	11/28/2018	12/19/2018
APPENDIX III	Boron	N/R	0.428	0.45	0.49	0.39	0.43	0.4	0.51	0.41
	Calcium	N/R	326	305	340	323.0	321	326	354	330.0
	Chloride	(250)	8.4	5.8	4.4	3.6	4.1	4.3	5.1	4.5
	Fluoride	4	1.1	0.89	ND (0.27 J)	0.34	ND (0.23 J)	ND	ND (0.063 J)	ND (0.28 J)
	Sulfate	(250)	**1560**	**1560**	**1450**	**1470**	**1500**	**1720**	**1730**	1520
	TDS	(500)	**2200**	**2080**	**31**	**2160**	**2160**	**2130**	**2320**	2060
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0025 J)	ND (0.0016 J)	ND (0.0016 J)	ND	ND	ND (0.0012 J)	ND (0.0019 J)	ND (0.00075 J)
	Barium	2	0.0519	0.049	0.046	0.0380	0.036	0.041	0.039	0.04
	Beryllium	0.004	ND	ND	ND	ND (0.000055 J)	ND	ND	ND (0.000056 J)	ND (0.00006 J)
	Cadmium	0.005	ND	ND	ND (0.00014 J)	ND (0.00018 J)	ND (0.00015 J)	ND (0.00019 J)	ND (0.00022 J)	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND (0.0018 J)
	Cobalt*	0.006	ND	ND	ND (0.0076 J)	ND (0.0016 J)	ND (0.0018 J)	ND (0.0014 J)	ND (0.0016 J)	ND (0.0014 J)
	Lead*	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium*	0.04	ND (0.0399 J)	ND (0.044 J)	ND (0.044 J)	ND (0.044 J)	ND (0.043 J)	ND (0.039 J)	ND (0.044 J)	ND (0.043 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum*	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.75	2.09	0.878 U	1.14 U	1.45	1.09 U	pending	1.3
	Selenium	0.05	ND	ND	ND	ND (0.0024 J)	ND (0.002 J)	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Monitoring well BRGWC-47 was originally installed and sampled as PZ-47. Analytical reports may refer to either PZ-47 or BRGWC-47. They should be considered interchangeable
11. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-11
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-50							
			3/15/2018	5/1/2018	6/28/2018	8/1/2018	10/29/2018	11/28/2018	12/19/2018	1/16/2019
APPENDIX III	Boron	N/R	0.32	0.32	0.34	0.28	0.3	0.35	0.35	0.37
	Calcium	N/R	ND	225	242	246	236.0	254	252	248
	Chloride	(250)	23.3	23.4	24.0	25.7	24.9	24	23.3	24.1
	Fluoride	4	0.84	0.91	1.1	2	ND (0.24 J)	0.41	0.54	1.1
	Sulfate	(250)	**1590**	**1550**	**1530**	**1580**	**1750**	**1780**	**1650**	1510
	TDS	(500)	**2440**	**2190**	**2290**	**2360**	**2300**	**2300**	**2190**	2270
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0014 J)	ND	ND	ND (0.00074 J)	ND	ND	ND	ND
	Barium	2	ND	0.024	0.021	0.0200	0.019	0.02	0.02	0.02
	Beryllium	0.004	ND	ND	ND (0.0030 J)	ND (0.0025 J)	0.0042	ND (0.0029 J)	0.0043	0.0038
	Cadmium	0.005	ND	0.011	0.087	0.042	0.083	0.031	0.042	0.028
	Chromium	0.1	ND	ND	ND (0.0023 J)	ND (0.0046 J)	ND	ND	ND	znd
	Cobalt	0.006*	ND	1.4	1.3	1.4	1.4	1.4	1.5	1.4
	Lead	0.015*	ND	ND	ND (0.00054 J)	ND	ND (0.0003 J)	ND	ND	ND
	Lithium	0.04*	ND (0.038 J)	ND (0.042 J)	ND (0.040 J)	ND (0.036 J)	ND (0.041 J)	ND (0.041 J)	ND (0.043 J)	ND (0.042 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	0.1*	ND	ND (0.0022 J)	ND	ND (0.0033 J)	ND	ND	ND	ND
	Radium	5	1.31	1.69	1.04 U	1.67	0.992 U	1.76	2.15	1.39
	Selenium	0.05	ND	ND	ND	0.0031 J	ND (0.002 J)	ND (0.0017 J)	ND	ND
	Thallium	0.002	ND	ND	ND	<0.00014	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Monitoring well BRGWC-50 was originally installed and sampled as PZ-50. Analytical reports may refer to either PZ-50 or BRGWC-50. They should be considered interchangeable
11. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

Table A-12
Analytical Data Summary
Plant Branch Ash Pond AP-BCD
Milledgeville, Georgia

Substance		MCL/ (SMCL)	BRGWC-52I							
			8/10/2019	8/23/2018	9/19/2018	10/29/2018	11/28/2018	12/20/2018	1/17/2019	2/13/2019
APPENDIX III	Boron	N/R	1.3	1.4	1.7	1.3	1.5	1.6	1.5	1.7
	Calcium	N/R	410	33.9	42.3	40	38.2	43.2	39.4	36.9
	Chloride	(250)	6.9	7.5	6.6	7.8	7.2	6.6	6.4	6.5
	Fluoride	4	1.6	0.32	ND (0.22 J)	ND (0.14 J)	ND (0.24 J)	0.3	0.23	ND
	Sulfate	(250)	183	145	178	157	189	150	157	169
	TDS	(500)	344	333	364	334	357	335	347	350
APPENDIX IV	Antimony	0.006	ND	ND (0.00085 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0013 J)	ND (0.0038 J)	ND (0.0016 J)	ND (0.0032 J)	ND (0.0032 J)	ND
	Barium	2	0.038	0.030	0.030	0.025	0.017	0.013	0.017	0.025
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0017 J)	ND	ND	ND	ND	ND	ND	ND
	Cobalt*	0.006	ND (0.0043 J)	ND (0.0026 J)	ND (0.0028 J)	ND (0.0015 J)	ND (0.0012 J)	ND	ND	ND
	Lead*	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium*	0.04	ND (0.0087 J)	ND (0.0089 J)	ND (0.005 J)	ND (0.0048 J)	ND (0.0052 J)	ND (0.0042 J)	ND (0.0039 J)	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum*	0.1	ND (0.0032 J)	ND (0.0050 J)	ND (0.0061 J)	ND (0.0065 J)	ND (0.0027 J)	ND	ND	ND
	Radium	5	1.91	1.86	1.64	1.36 U	1.07 U	0.892 U	0.411 U	1.68
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value 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 (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Monitoring well BRGWC-52I was originally installed and sampled as PZ-52I. Analytical reports may refer to either PZ-52I or BRGWC-52I. They should be considered interchangeable.
11. *Values are Risk Based Screening Levels provided by EPA in the Federal rule update, October 2018

TABLE A-13.
ANALYTICAL DATA SUMMARY - POND BCD (March 2019)
GPC PLANT BRANCH
MILLDEGEVILLE, GEORGIA

Analyte	Units	SCREENING/TARGET LEVELS				GROUNDWATER MONITORING WELLS											
		MCL	SMCL	PQL/RL	MDL	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
					Sample Date:	3/19/2019	3/19/2019	3/19/2019	3/20/2019	3/19/2019	3/20/2019	3/20/2019	3/20/2019	3/20/2019	3/19/2019	3/20/2019	3/20/2019
Appendix III																	
BORON, TOTAL	mg/L	N/R	N/R	0.05	0.021	ND	ND (0.008 J)	0.068	1.5	1.1	1.5	1.7	1.4	0.043	0.41	0.34	1.6
CALCIUM, TOTAL	mg/L	N/R	N/R	0.25	0.13	5.9	ND (15.9 J)	ND (13.5 J)	54.2	60.2	55.4	141	52.8	31.2	335	222	40.3
CHLORIDE, TOTAL	mg/L	N/R	250	1.0	0.89	3.5	3.2	3.8	6.4	5.8	5.6	5.8	7.3	27.7	4.7	23.5	6.7
FLUORIDE, TOTAL	mg/L	4	2	0.2	0.082	ND	ND	ND	ND (0.18 J)	ND (0.2 J)	ND (0.091 J)	0.31	ND	ND (0.066 J)	ND	ND (0.21 J)	ND (0.14 J)
pH	S.U.	N/R	N/R	N/R	N/R	5.71	6.28	5.28	6.03	5.75	4.40	6.24	5.88	6.10	5.89	5.32	6.59
SULFATE, TOTAL	mg/L	N/R	250	1.0	0.7	ND (0.75 J)	2.2	65	240	199	278	623	**409**	127	**1100**	**1740**	180
TOTAL DISSOLVED SOLIDS	mg/L	N/R	500	5.0	3.4	82	132	161	412	334	391	885	**564**	302	**2050**	**2280**	366
Appendix IV																	
ANTIMONY, TOTAL	mg/L	0.006	N/R	0.003	0.00078	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
ARSENIC, TOTAL	mg/L	0.01	N/R	0.005	0.00057	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
BARIUM, TOTAL	mg/L	2	N/R	0.01	0.00078	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
BERYLLIUM, TOTAL	mg/L	0.004	N/R	0.003	0.00005	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
CADMIUM, TOTAL	mg/L	0.005	N/R	0.001	0.00009	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
CHROMIUM, TOTAL	mg/L	0.1	N/R	0.01	0.0016	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
COBALT, TOTAL	mg/L	N/R	N/R	0.01	0.00052	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
LEAD, TOTAL	mg/L	0.015	N/R	0.005	0.00027	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
LITHIUM, TOTAL	mg/L	N/R	N/R	0.005	0.00095	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
MERCURY, TOTAL	mg/L	0.002	N/R	0.01	0.0014	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
MOLYBDENUM, TOTAL	mg/L	N/R	N/R	0.005	0.00095	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
RADIUM (226 + 228)	pCi/L	5	N/R	1	varies	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
SELENIUM, TOTAL	mg/L	0.05	N/R	0.001	0.00014	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
THALLIUM, TOTAL	mg/L	0.002	N/R	0.01	1.9E-03	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled

NOTES:

1. Bolded exceeds MCL/SMCL.
2. mg/L - Milligrams per Liter
3. pCi/L - picocuries per Liter
4. N/R - indicated constituent does not have an established Maximum Contaminant Limit.
5. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less that the PQL with a J.
6. ND - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect.
7. MCL/SMCL - Maximum Contaminant Level/Secondary Contaminant Level - United States Environmental Protection Agency (USEPA) Table of Regulated Drinking Water Contaminants (updated June 2016). Available at https://www.epa.gov/ground-water-and-drinking-water/table-regulated-drinking-water-contaminants. USEPA Secondary Drinking Water Standards: Guidance for Nuisance Chemicals (updated January 2016). Available at https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-
8. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed as less than the MDC. The MDC varies depending upon the sample amount and elapsed time of the measurement.

LABORATORY ANALYTICAL DATA

August – September 2016

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

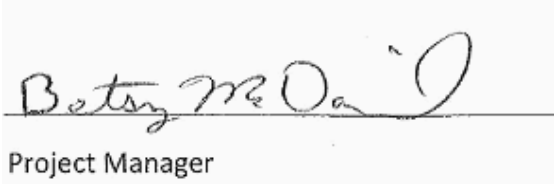
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZI0059**
September 13, 2016
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:



Project Manager

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-6S	AZI0059-01	Ground Water	09/01/16 10:40	09/02/16 09:25
EB-1-9-1-16	AZI0059-02	DI Water	09/01/16 11:35	09/02/16 09:25
BRGWA-12I	AZI0059-03	Ground Water	09/01/16 14:15	09/02/16 09:25
BRGWA-12S	AZI0059-04	Ground Water	09/01/16 17:35	09/02/16 09:25

PACE ANALYTICAL SERVICES, INC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059
Client ID: BRGWA-6S
Date/Time Sampled: 9/1/2016 10:40:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0059-01
Date/Time Received: 9/2/2016 9:25:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	299	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	2.5	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/05/16 23:48	6090088	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/05/16 10:11	09/05/16 23:48	6090088	RLC
Sulfate	0.60	1.0	0.05	mg/L	EPA 300.0	J	1	09/05/16 10:11	09/05/16 23:48	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Barium	0.0142	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Calcium	3.30	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Chromium	0.0147	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Lithium	0.0030	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:05	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:32	6090124	MTC

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059
Client ID: EB-1-9-1-16
Date/Time Sampled: 9/1/2016 11:35:00AM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0059-02
Date/Time Received: 9/2/2016 9:25:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	0.11	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	09/05/16 10:11	09/06/16 00:09	6090088	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 00:09	6090088	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 00:09	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:10	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:34	6090124	MTC

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(770) 734-4200 FAX (770) 734-4201

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059
Client ID: BRGWA-12I
Date/Time Sampled: 9/1/2016 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0059-03
Date/Time Received: 9/2/2016 9:25:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	142	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	3.3	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/06/16 00:30	6090088	RLC
Fluoride	0.20	0.30	0.02	mg/L	EPA 300.0	J	1	09/05/16 10:11	09/06/16 00:30	6090088	RLC
Sulfate	2.7	1.0	0.05	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 00:30	6090088	RLC
Metals, Total											
Antimony	0.0015	0.0030	0.0008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Barium	0.0454	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Boron	0.0093	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Calcium	8.98	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Chromium	0.0009	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Molybdenum	0.0020	0.0100	0.0017	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Lithium	0.0061	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:16	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:37	6090124	MTC

PACE ANALYTICAL SERVICES, INC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059
Client ID: BRGWA-12S
Date/Time Sampled: 9/1/2016 5:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0059-04
Date/Time Received: 9/2/2016 9:25:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	69	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/06/16 02:34	6090088	RLC
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	09/05/16 10:11	09/06/16 02:34	6090088	RLC
Sulfate	1.7	1.0	0.05	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 02:34	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Barium	0.0528	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Calcium	4.61	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Chromium	0.0013	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:22	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:39	6090124	MTC

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September 13, 2016

Report No.: AZI0059

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090135 - SM 2540 C											
Blank (6090135-BLK1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090135-BS1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	336	25	10	mg/L	400.00		84	84-108			
Duplicate (6090135-DUP1)		**Source: AZI0058-08**				Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	580	25	10	mg/L		539			7	10	
Duplicate (6090135-DUP2)		**Source: AZI0077-04**				Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	691	25	10	mg/L		769			11	10	QR-03

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September 13, 2016

Report No.: AZI0059

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090088 - EPA 300.0											
Blank (6090088-BLK1)						Prepared & Analyzed: 09/05/16					
Chloride	0.05	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6090088-BS1)						Prepared & Analyzed: 09/05/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	10.0	0.30	0.02	mg/L	10.010		100	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6090088-MS1)		**Source: AZI0050-01**				Prepared & Analyzed: 09/05/16					
Chloride	466	0.25	0.01	mg/L	10.010	478	NR	90-110			QM-02
Fluoride	11.8	0.30	0.02	mg/L	10.010	0.34	114	90-110			QM-05
Sulfate	275	1.0	0.05	mg/L	10.010	291	NR	90-110			QM-02
Matrix Spike (6090088-MS2)		**Source: AZI0059-03**				Prepared: 09/05/16 Analyzed: 09/06/16					
Chloride	13.9	0.25	0.01	mg/L	10.010	3.33	105	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.010	0.20	107	90-110			
Sulfate	12.7	1.0	0.05	mg/L	10.010	2.66	101	90-110			
Matrix Spike Dup (6090088-MSD1)		**Source: AZI0050-01**				Prepared & Analyzed: 09/05/16					
Chloride	486	0.25	0.01	mg/L	10.010	478	84	90-110	4	15	QM-02
Fluoride	11.7	0.30	0.02	mg/L	10.010	0.34	114	90-110	0.4	15	QM-05
Sulfate	275	1.0	0.05	mg/L	10.010	291	NR	90-110	0.1	15	QM-02

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
Blank (6090121-BLK1)						Prepared: 09/07/16 Analyzed: 09/08/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6090121-BS1)						Prepared: 09/07/16 Analyzed: 09/08/16					
Antimony	0.109	0.0030	0.0008	mg/L	0.10000		109	80-120			
Arsenic	0.0983	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.0965	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.0979	0.0030	0.00008	mg/L	0.10000		98	80-120			
Boron	0.990	0.100	0.0064	mg/L	1.0000		99	80-120			
Cadmium	0.100	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	0.942	0.500	0.0311	mg/L	1.0000		94	80-120			
Chromium	0.100	0.0100	0.0009	mg/L	0.10000		100	80-120			
Cobalt	0.0969	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.0966	0.0050	0.0005	mg/L	0.10000		97	80-120			
Lead	0.0985	0.0050	0.0001	mg/L	0.10000		98	80-120			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000		102	80-120			
Nickel	0.0957	0.0050	0.0006	mg/L	0.10000		96	80-120			
Selenium	0.0999	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.0964	0.0050	0.0005	mg/L	0.10000		96	80-120			
Thallium	0.0983	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000		104	80-120			
Zinc	0.103	0.0100	0.0021	mg/L	0.10000		103	80-120			
Lithium	0.0971	0.0500	0.0021	mg/L	0.10000		97	80-120			

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
Matrix Spike (6090121-MS1)		**Source: AZI0059-01**			Prepared: 09/07/16 Analyzed: 09/08/16						
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	ND	110	75-125			
Arsenic	0.0984	0.0050	0.0016	mg/L	0.10000	ND	98	75-125			
Barium	0.112	0.0100	0.0004	mg/L	0.10000	0.0142	98	75-125			
Beryllium	0.0935	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	0.952	0.100	0.0064	mg/L	1.0000	ND	95	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	4.12	0.500	0.0311	mg/L	1.0000	3.30	82	75-125			
Chromium	0.117	0.0100	0.0009	mg/L	0.10000	0.0147	102	75-125			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Copper	0.0970	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Lead	0.0973	0.0050	0.0001	mg/L	0.10000	0.0001	97	75-125			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000	ND	103	75-125			
Nickel	0.103	0.0050	0.0006	mg/L	0.10000	0.0035	100	75-125			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.0973	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Thallium	0.0984	0.0010	0.0002	mg/L	0.10000	ND	98	75-125			
Vanadium	0.111	0.0100	0.0071	mg/L	0.10000	ND	111	75-125			
Zinc	0.109	0.0100	0.0021	mg/L	0.10000	0.0062	103	75-125			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000	0.0030	96	75-125			
Matrix Spike Dup (6090121-MSD1)		**Source: AZI0059-01**			Prepared: 09/07/16 Analyzed: 09/08/16						
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	ND	109	75-125	0.06	20	
Arsenic	0.0992	0.0050	0.0016	mg/L	0.10000	ND	99	75-125	0.8	20	
Barium	0.113	0.0100	0.0004	mg/L	0.10000	0.0142	99	75-125	1	20	
Beryllium	0.0946	0.0030	0.00008	mg/L	0.10000	ND	95	75-125	1	20	
Boron	0.904	0.100	0.0064	mg/L	1.0000	ND	90	75-125	5	20	
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125	3	20	
Calcium	4.13	0.500	0.0311	mg/L	1.0000	3.30	82	75-125	0.2	20	
Chromium	0.110	0.0100	0.0009	mg/L	0.10000	0.0147	95	75-125	6	20	
Cobalt	0.0972	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	4	20	
Copper	0.0961	0.0050	0.0005	mg/L	0.10000	ND	96	75-125	1	20	
Lead	0.0989	0.0050	0.0001	mg/L	0.10000	0.0001	99	75-125	2	20	
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000	ND	103	75-125	0.4	20	
Nickel	0.103	0.0050	0.0006	mg/L	0.10000	0.0035	100	75-125	0.4	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	3	20	
Silver	0.0994	0.0050	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.0996	0.0010	0.0002	mg/L	0.10000	ND	100	75-125	1	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	3	20	
Zinc	0.108	0.0100	0.0021	mg/L	0.10000	0.0062	102	75-125	1	20	
Lithium	0.0985	0.0500	0.0021	mg/L	0.10000	0.0030	96	75-125	0.3	20	

PACE ANALYTICAL SERVICES, INC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
Post Spike (6090121-PS1)		**Source: AZI0059-01**				Prepared: 09/07/16 Analyzed: 09/08/16					
Antimony	95.5			ug/L	100.00	0.627	95	80-120			
Arsenic	100			ug/L	100.00	0.162	100	80-120			
Barium	113			ug/L	100.00	14.2	98	80-120			
Beryllium	102			ug/L	100.00	0.0291	102	80-120			
Boron	956			ug/L	1000.0	5.64	95	80-120			
Cadmium	104			ug/L	100.00	0.0253	103	80-120			
Calcium	4230			ug/L	1000.0	3300	93	80-120			
Chromium	115			ug/L	100.00	14.7	101	80-120			
Cobalt	101			ug/L	100.00	0.235	101	80-120			
Copper	100			ug/L	100.00	0.237	100	80-120			
Lead	101			ug/L	100.00	0.130	101	80-120			
Molybdenum	103			ug/L	100.00	0.0836	102	80-120			
Nickel	103			ug/L	100.00	3.46	100	80-120			
Selenium	103			ug/L	100.00	0.602	103	80-120			
Silver	98.7			ug/L	100.00	0.0071	99	80-120			
Thallium	100			ug/L	100.00	0.0246	100	80-120			
Vanadium	109			ug/L	100.00	4.25	105	80-120			
Zinc	110			ug/L	100.00	6.19	104	80-120			
Lithium	103			ug/L	100.00	2.97	100	80-120			
Batch 6090124 - EPA 7470A											
Blank (6090124-BLK1)						Prepared & Analyzed: 09/07/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090124-BS1)						Prepared & Analyzed: 09/07/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0059

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090124 - EPA 7470A											
Matrix Spike (6090124-MS1)			**Source: AZI0058-10**			Prepared & Analyzed: 09/07/16					
Mercury	0.00225	0.00050	0.000041	mg/L	2.5000E-3	ND	90	75-125			
Matrix Spike Dup (6090124-MSD1)			**Source: AZI0058-10**			Prepared & Analyzed: 09/07/16					
Mercury	0.00222	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125	1	20	
Post Spike (6090124-PS1)			**Source: AZI0058-10**			Prepared & Analyzed: 09/07/16					
Mercury	1.63			ug/L	1.6667	0.0124	97	80-120			

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asl-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant Branch AP
PROJECT #: Phase 2 CCR

ANALYSIS REQUESTED

Collection DATE m/d/YY	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE							P	P	P	P						
PRESERVATION							3	7	3							
9/1/16	1040	GW		✓	BRGWA-6S	3	1	1	1							1
9/1/16	1135	W		✓	EB-1 - 9-1-16	3	1	1	1							2
9/1/16	1415	GW		✓	BRGWA-12I	3	1	1	1							3
9/1/16	1735	GW		✓	BRGWA-12S	3	1	1	1							4

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: C. Parker (ACC) DATE/TIME: See above
RELINQUISHED BY: C. Parker DATE/TIME: 9-2-2016 0925
RECEIVED BY: DATE/TIME:
RELINQUISHED BY: DATE/TIME:
RECEIVED BY LAB: Charles Hardy DATE/TIME: 9/2/16 0925
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS
Custody Seal: (Intact) Broken Not Present
# of Coolers: 1
Cooler ID:
Temperature: 4° Min 4° Max
Ice: (Yes) No NA
Labels checked: (Yes) No NA

FOR LAB USE ONLY
LAB #: AZI0059
Entered into LIMS: CH
Tracking #:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 9/13/2016 5:30:51PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/02/16 09:25

Work Order: AZI0059
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 4 **#Containers:** 12

Minimum Temp(C): 4.0 **Maximum Temp(C):** 4.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 04, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch AP
Pace Project No.: 30195120

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on September 06, 2016. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch AP
Pace Project No.: 30195120

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch AP
Pace Project No.: 30195120

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195120001	**BRGWA-6S**	Water	09/01/16 10:40	09/06/16 08:50
30195120002	**EB-1-9-1-16**	Water	09/01/16 11:35	09/06/16 08:50
30195120003	**BRGWA-12I**	Water	09/01/16 14:15	09/06/16 08:50
30195120004	**BRGWA-12S**	Water	09/01/16 17:35	09/06/16 08:50

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: Plant Branch AP
Pace Project No.: 30195120

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195120001	**BRGWA-6S**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195120002	**EB-1-9-1-16**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195120003	**BRGWA-12I**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195120004	**BRGWA-12S**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195120

Sample: BRGWA-6S **Lab ID: 30195120001** Collected: 09/01/16 10:40 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.130 ± 0.0955 (0.163) C:103% T:NA**	pCi/L	09/16/16 08:19	13982-63-3	
Radium-228	EPA 9320	**0.473 ± 0.314 (0.582) C:81% T:77%**	pCi/L	09/23/16 01:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.603 ± 0.410 (0.745)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: EB-1-9-1-16 **Lab ID: 30195120002** Collected: 09/01/16 11:35 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0695 ± 0.116 (0.253) C:85% T:NA**	pCi/L	09/16/16 08:19	13982-63-3	
Radium-228	EPA 9320	**1.26 ± 0.508 (0.788) C:71% T:69%**	pCi/L	09/23/16 01:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.33 ± 0.624 (1.04)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: BRGWA-12I **Lab ID: 30195120003** Collected: 09/01/16 14:15 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0799 ± 0.110 (0.232) C:85% T:NA**	pCi/L	09/16/16 08:19	13982-63-3	
Radium-228	EPA 9320	**1.10 ± 0.471 (0.756) C:69% T:74%**	pCi/L	09/23/16 01:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.18 ± 0.581 (0.988)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: BRGWA-12S **Lab ID: 30195120004** Collected: 09/01/16 17:35 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.230 ± 0.124 (0.174) C:84% T:NA**	pCi/L	09/16/16 08:19	13982-63-3	
Radium-228	EPA 9320	**0.413 ± 0.367 (0.723) C:69% T:79%**	pCi/L	09/23/16 01:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.643 ± 0.491 (0.897)**	pCi/L	10/03/16 15:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195120

QC Batch: 232977 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195120001, 30195120002, 30195120003, 30195120004

METHOD BLANK: 1141794 Matrix: Water
Associated Lab Samples: 30195120001, 30195120002, 30195120003, 30195120004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.109 (0.163) C:88% T:NA	pCi/L	09/16/16 08:18	

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

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195120

QC Batch: 232983 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195120001, 30195120002, 30195120003, 30195120004

METHOD BLANK: 1141811 Matrix: Water
Associated Lab Samples: 30195120001, 30195120002, 30195120003, 30195120004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.562 ± 0.343 (0.628) C:77% T:84%	pCi/L	09/23/16 01:56	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant Branch AP
Pace Project No.: 30195120

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.

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.

SAMPLE QUALIFIERS

Sample: 30195120003

[1] Sample collection time on containers does not match COC; client was notified.

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase 2 CCR

ANALYSIS REQUESTED

Collection DATE m/d/yy	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:							P	P	P	P
PRESERVATION:							3	7	3	
9/1/16	1040	GW		✓	BRGWA-6S	3	1	1	1	001
9/1/16	1135	W		✓	EB-1 - 9-1-16	3	1	1	1	002
9/1/16	1415	GW		✓	BRGWA-12I	3	1	1	1	003
9/1/16	1735	GW		✓	BRGWA-12S	3	1	1	1	004

WO#:30195120

30195120

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: C Parker (ACC) DATE/TIME: See above
RELINQUISHED BY: C Parker DATE/TIME: 9-2-2016
RECEIVED BY: Pace DATE/TIME: 9-6-16/0850
RELINQUISHED BY: DATE/TIME:
RECEIVED BY LAB: DATE/TIME:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA	Ice: Yes No NA	Temperature: Min: Max.	Custody Seal: Intact Broken Not Present	# of Coolers	Cooler ID:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project # 30195120

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 6812 5098 8849

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AMR 9-6-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X	X		4. AMR 9-6-16
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT		X		5. Time on 003 is 1515 Bottle
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed AMR Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: AMR Date: 9-6-16

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	WRR
Date:	9/21/2016
Worklist:	31359
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1141794
MB concentration:	0.177
M/B Counting Uncertainty:	0.106
MB MDC:	0.163
MB Numerical Performance Indicator:	3.28
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS31359	LCSD31359
Count Date:	9/16/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.677	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.498	
Target Conc. (pCi/L, g, F):	8.971	
Uncertainty (Calculated):	0.422	
Result (pCi/L, g, F):	8.159	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.589	
Numerical Performance Indicator:	-2.19	
Percent Recovery:	90.96%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment

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):	
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:	

Duplicate Sample Assessment

Sample I.D.:	30195125002
Duplicate Sample I.D.	30195125002DUP
Sample Result (pCi/L, g, F):	0.276
Sample Result Counting Uncertainty (pCi/L, g, F):	0.203
Sample Duplicate Result (pCi/L, g, F):	0.106
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.241
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.049
Duplicate RPD:	87.95%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

30195125002
30195125002DUP

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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.

***Batch must be re-prepped due to unacceptable precision.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	9/15/2016
Worklist:	31364
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1141811
MB concentration:	0.562
M/B Counting Uncertainty:	0.328
MB MDC:	0.628
MB Numerical Performance Indicator:	3.36
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31364	LCSD31364
Count Date:	9/23/2016	
Spike I.D.:	16-025	
Spike Concentration (pCi/mL):	25.603	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.802	
Target Conc. (pCi/L, g, F):	6.385	
Uncertainty (Calculated):	0.460	
Result (pCi/L, g, F):	7.456	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.639	
Numerical Performance Indicator:	2.67	
Percent Recovery:	116.77%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment	
Sample I.D.:	30195125002
Duplicate Sample I.D.	30195125002DUP
Sample Result (pCi/L, g, F):	1.548
Sample Result Counting Uncertainty (pCi/L, g, F):	0.474
Sample Duplicate Result (pCi/L, g, F):	2.200
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.545
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.767
Duplicate RPD:	34.76%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

30195125002
30195125002DUP

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:	

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

Comments:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZI0174
September 16, 2016
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-23S	AZI0174-01	Ground Water	09/06/16 14:14	09/07/16 12:50
Dup-1	AZI0174-02	Ground Water	09/06/16 00:00	09/07/16 12:50
BRGWC-30I	AZI0174-03	Ground Water	09/06/16 15:30	09/07/16 12:50

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174
Client ID: BRGWA-23S
Date/Time Sampled: 9/6/2016 2:14:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0174-01
Date/Time Received: 9/7/2016 12:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	146	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	5.8	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 21:20	6090212	RLC
Fluoride	0.42	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 21:20	6090212	RLC
Sulfate	38	1.0	0.05	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 21:20	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Barium	0.0624	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Boron	0.0362	0.100	0.0064	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Calcium	12.8	2.50	0.155	mg/L	EPA 6020B		5	09/08/16 10:40	09/13/16 12:39	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Cobalt	0.0028	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Molybdenum	0.0028	0.0100	0.0017	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Lithium	0.0028	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:56	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:12	6090210	MTC

PACE ANALYTICAL SERVICES, INC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174
Client ID: Dup-1
Date/Time Sampled: 9/6/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0174-02
Date/Time Received: 9/7/2016 12:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	491	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	6.7	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 23:03	6090212	RLC
Fluoride	0.46	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 23:03	6090212	RLC
Sulfate	310	20	1.0	mg/L	EPA 300.0		20	09/08/16 19:50	09/13/16 13:59	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Barium	0.0202	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Boron	1.90	1.00	0.0642	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 17:21	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Calcium	66.2	5.00	0.311	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 17:21	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Lithium	0.0113	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:01	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:15	6090210	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174
Client ID: BRGWC-30I
Date/Time Sampled: 9/6/2016 3:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0174-03
Date/Time Received: 9/7/2016 12:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	505	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	6.7	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 23:24	6090212	RLC
Fluoride	0.43	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 23:24	6090212	RLC
Sulfate	310	20	1.0	mg/L	EPA 300.0		20	09/08/16 19:50	09/13/16 14:20	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Barium	0.0206	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Boron	1.96	1.00	0.0642	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 17:27	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Calcium	63.3	5.00	0.311	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 17:27	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Lithium	0.0117	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:07	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:22	6090210	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090220 - SM 2540 C											
Blank (6090220-BLK1)						Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090220-BS1)						Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	388	25	10	mg/L	400.00		97	84-108			
Duplicate (6090220-DUP1)		**Source: AZI0022-04RE1**				Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	43	25	10	mg/L		58			30	10	QR-03
Duplicate (6090220-DUP2)		**Source: AZI0174-01**				Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	150	25	10	mg/L		146			3	10	

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090212 - EPA 300.0											
Blank (6090212-BLK1)						Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6090212-BS1)						Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.010		105	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6090212-MS1)			**Source: AZI0168-02**			Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	25.2	0.25	0.01	mg/L	10.010	15.8	94	90-110			
Fluoride	11.9	0.30	0.02	mg/L	10.010	0.17	117	90-110			QM-05
Sulfate	147	1.0	0.05	mg/L	10.010	153	NR	90-110			QM-05
Matrix Spike (6090212-MS2)			**Source: AZI0192-04**			Prepared: 09/08/16 Analyzed: 09/11/16					
Chloride	26.4	0.25	0.01	mg/L	10.010	17.3	91	90-110			
Fluoride	12.0	0.30	0.02	mg/L	10.010	0.32	117	90-110			QM-05
Sulfate	177	1.0	0.05	mg/L	10.010	185	NR	90-110			QM-05
Matrix Spike Dup (6090212-MSD1)			**Source: AZI0168-02**			Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	25.1	0.25	0.01	mg/L	10.010	15.8	94	90-110	0.08	15	
Fluoride	11.8	0.30	0.02	mg/L	10.010	0.17	117	90-110	0.5	15	QM-05
Sulfate	147	1.0	0.05	mg/L	10.010	153	NR	90-110	0.09	15	QM-05

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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Blank (6090169-BLK1)						Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6090169-BS1)						Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.0993	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	80-120			
Beryllium	0.0976	0.0030	0.00008	mg/L	0.10000		98	80-120			
Boron	1.02	0.100	0.0064	mg/L	1.0000		102	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	0.979	0.500	0.0311	mg/L	1.0000		98	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.0986	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.0997	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0987	0.0050	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0990	0.0100	0.0010	mg/L	0.10000		99	80-120			
Silver	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.0993	0.0100	0.0071	mg/L	0.10000		99	80-120			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000		100	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		99	80-120			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Matrix Spike (6090169-MS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.169	0.0100	0.0004	mg/L	0.10000	0.0759	93	75-125			
Beryllium	0.0930	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	1.94	1.00	0.0642	mg/L	1.0000	0.888	105	75-125			
Cadmium	0.0991	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125			
Calcium	96.8	5.00	0.311	mg/L	1.0000	95.9	82	75-125			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125			
Cobalt	0.0997	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Copper	0.0960	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Lead	0.0960	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.125	0.0100	0.0017	mg/L	0.10000	0.0266	98	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0011	101	75-125			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.0977	0.0050	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0966	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000	0.0027	98	75-125			
Lithium	0.0941	0.0500	0.0021	mg/L	0.10000	0.0024	92	75-125			
Matrix Spike Dup (6090169-MSD1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	3	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	0.8	20	
Barium	0.168	0.0100	0.0004	mg/L	0.10000	0.0759	92	75-125	0.7	20	
Beryllium	0.0960	0.0030	0.00008	mg/L	0.10000	ND	96	75-125	3	20	
Boron	1.96	1.00	0.0642	mg/L	1.0000	0.888	107	75-125	0.8	20	
Cadmium	0.0992	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125	0.09	20	
Calcium	98.6	5.00	0.311	mg/L	1.0000	95.9	263	75-125	2	20	QM-02
Chromium	0.107	0.0100	0.0009	mg/L	0.10000	ND	107	75-125	2	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	0.5	20	
Copper	0.0975	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Lead	0.0973	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	1	20	
Molybdenum	0.126	0.0100	0.0017	mg/L	0.10000	0.0266	100	75-125	1	20	
Nickel	0.100	0.0050	0.0006	mg/L	0.10000	0.0011	99	75-125	2	20	
Selenium	0.0955	0.0100	0.0010	mg/L	0.10000	ND	95	75-125	2	20	
Silver	0.0938	0.0050	0.0005	mg/L	0.10000	ND	94	75-125	4	20	
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	2	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.104	0.0100	0.0021	mg/L	0.10000	0.0027	102	75-125	4	20	
Lithium	0.0983	0.0500	0.0021	mg/L	0.10000	0.0024	96	75-125	4	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0174

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Post Spike (6090169-PS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	101			ug/L	100.00	0.299	101	80-120			
Arsenic	102			ug/L	100.00	0.235	101	80-120			
Barium	175			ug/L	100.00	75.9	99	80-120			
Beryllium	97.5			ug/L	100.00	0.0116	97	80-120			
Boron	1910			ug/L	1000.0	888	102	80-120			
Cadmium	101			ug/L	100.00	0.400	101	80-120			
Calcium	98600			ug/L	1000.0	95900	262	80-120			QM-02
Chromium	101			ug/L	100.00	0.306	101	80-120			
Cobalt	95.3			ug/L	100.00	0.465	95	80-120			
Copper	93.2			ug/L	100.00	0.123	93	80-120			
Lead	94.2			ug/L	100.00	0.0087	94	80-120			
Molybdenum	128			ug/L	100.00	26.6	101	80-120			
Nickel	94.4			ug/L	100.00	1.09	93	80-120			
Selenium	95.4			ug/L	100.00	-0.575	96	80-120			
Silver	97.8			ug/L	100.00	0.0070	98	80-120			
Thallium	95.3			ug/L	100.00	0.0424	95	80-120			
Vanadium	98.9			ug/L	100.00	0.409	99	80-120			
Zinc	101			ug/L	100.00	2.66	98	80-120			
Lithium	101			ug/L	100.00	2.37	98	80-120			
Batch 6090210 - EPA 7470A											
Blank (6090210-BLK1)						Prepared & Analyzed: 09/09/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090210-BS1)						Prepared & Analyzed: 09/09/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			

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September 16, 2016

Report No.: AZI0174

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090210 - EPA 7470A											
Matrix Spike (6090210-MS1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
Matrix Spike Dup (6090210-MSD1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	0.00231	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125	1	20	
Post Spike (6090210-PS1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	1.69			ug/L	1.6667	-0.00477	102	80-120			

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Attention: Mr. Joju Abraham

September 16, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical®
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 1 OF 1

CLIENT NAME:
Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase 2 CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE							P	P	P	P						
PRESERVATION							3	7	3							
9/6/16	1414	GW		✓	BRGWA-23S	3		1	1	1						1
9/6/16	—	GW		✓	DUP-1	3		1	1	1						2
9/6/16	1530	GW		✓	BRGWC-30I	3		1	1	1						3

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: (ACC) — DATE/TIME: 9/6/16 1700

RELINQUISHED BY: — DATE/TIME: 9/7/2016 0918

RECEIVED BY: — DATE/TIME: 9-7-16 918

RELINQUISHED BY: — DATE/TIME: 9-7-16 1250

RECEIVED BY LAB: — DATE/TIME: 09-07-16 1250

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Custody Seal: (Intact) Broken Not Present — # of Coolers — Cooler ID:

Rec'd checked: Yes No NA — Ice: Yes No NA — Temperature: Min: 1°C Max: 1°C

FOR LAB USE ONLY

LAB #: AZI0174

Entered into LIMS: MR

Tracking #:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 9/16/2016 5:23:02PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/07/16 12:50

Work Order: AZI0174
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 3 **#Containers:** 9

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 18, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch AP
Pace Project No.: 30195377

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on September 08, 2016. 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.

Report reissued 10/18/16 to reflect correct of Client Sample ID due to login error.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch AP
Pace Project No.: 30195377

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch AP
Pace Project No.: 30195377

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195377001	**BRGWA-23S**	Water	09/06/16 14:14	09/08/16 10:20
30195377002	**DUP-1**	Water	09/06/16 00:01	09/08/16 10:20
30195377003	**BRGWC-30I**	Water	09/06/16 15:30	09/08/16 10:20

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SAMPLE ANALYTE COUNT

Project: Plant Branch AP
Pace Project No.: 30195377

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195377001	**BRGWA-23S**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195377002	**DUP-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195377003	**BRGWC-30I**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195377

Sample: BRGWA-23S **Lab ID: 30195377001** Collected: 09/06/16 14:14 Received: 09/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.305 ± 0.196 (0.288) C:78% T:NA**	pCi/L	09/28/16 11:40	13982-63-3	
Radium-228	EPA 9320	**0.280 ± 0.468 (1.02) C:66% T:73%**	pCi/L	09/27/16 22:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.585 ± 0.664 (1.31)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: DUP-1 **Lab ID: 30195377002** Collected: 09/06/16 00:01 Received: 09/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.00195 ± 0.109 (0.305) C:84% T:NA**	pCi/L	09/28/16 11:40	13982-63-3	
Radium-228	EPA 9320	**1.50 ± 0.612 (0.989) C:67% T:83%**	pCi/L	09/27/16 22:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.50 ± 0.721 (1.29)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: BRGWC-30I **Lab ID: 30195377003** Collected: 09/06/16 15:30 Received: 09/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.121 ± 0.139 (0.274) C:83% T:NA**	pCi/L	09/28/16 11:40	13982-63-3	
Radium-228	EPA 9320	**0.886 ± 0.610 (1.18) C:54% T:86%**	pCi/L	09/27/16 22:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.01 ± 0.749 (1.45)**	pCi/L	10/05/16 11:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195377

QC Batch: 232982 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195377001, 30195377002, 30195377003

METHOD BLANK: 1141808 Matrix: Water
Associated Lab Samples: 30195377001, 30195377002, 30195377003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0285 ± 0.105 (0.269) C:84% T:NA	pCi/L	09/28/16 11:40	

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 AP
Pace Project No.: 30195377

QC Batch: 232988 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195377001, 30195377002, 30195377003

METHOD BLANK: 1141826 Matrix: Water
Associated Lab Samples: 30195377001, 30195377002, 30195377003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.265 ± 0.327 (0.690) C:78% T:84%	pCi/L	09/27/16 16:16	

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 AP
Pace Project No.: 30195377

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.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase 2 CCR

ANALYSIS REQUESTED

Collection DATE m/d/yy	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:							P	P	P	P						
PRESERVATION:							3	7	3							
9/6/16	1414	GW		✓	BRGWA-23S	3	1	1	1							001
9/6/16	—	GW		✓	DUP-1	3	1	1	1							002
9/6/16	1530	GW		✓	BRGWC-30I	3	1	1	1							003

WO#:30195377

30195377

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: (ACC)	DATE/TIME: 9/6/16 / 1700	RELINQUISHED BY:	DATE/TIME: 9/7/2016 / 0918
RECEIVED BY:	DATE/TIME: 9-7-16 / 918	RELINQUISHED BY:	DATE/TIME: 9-7-16 / 1250
RECEIVED BY LAB:	DATE/TIME:	SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS	
pH checked: Yes No NA	Ice: Yes No NA	Temperature: Min: Max:	Custody Seal: Intact Broken Not Present / # of Coolers / Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

received: Karen E. Lee 9-8-16 10:20

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, Georgia Project # 30195377

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 6812 5098 9525

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 9-8-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4. ~~NO Signature~~ Signature is on COC. 9/8/16
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13.
All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	✓			Initial when completed KH Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present:			✓	15.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH Date: 9-8-16

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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)
***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	9/15/2016
Worklist:	31368
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1141826
MB concentration:	0.265
M/B Counting Uncertainty:	0.323
MB MDC:	0.690
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31368	LCSD31368
Count Date:	9/27/2016	
Spike I.D.:	16-025	
Spike Concentration (pCi/mL):	25.564	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	6.390	
Uncertainty (Calculated):	0.460	
Result (pCi/L, g, F):	6.293	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.734	
Numerical Performance Indicator:	-0.22	
Percent Recovery:	98.49%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30195543001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195543001DUP	
Sample Result (pCi/L, g, F):	0.224	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.332	
Sample Duplicate Result (pCi/L, g, F):	0.235	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.330	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.046	30195543001
Duplicate RPD:	4.75%	30195543001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

10/5/16

Quality Control Sample Performance Assessment

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www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: WRR
Date: 9/26/2016
Worklist: 31363
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141808
MB concentration:	0.028
M/B Counting Uncertainty:	0.105
MB MDC:	0.269
MB Numerical Performance Indicator:	0.53
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31363	LCSD31363
Count Date:	9/28/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.677	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.498	
Target Conc. (pCi/L, g, F):	8.972	
Uncertainty (Calculated):	0.422	
Result (pCi/L, g, F):	8.112	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.797	
Numerical Performance Indicator:	-1.87	
Percent Recovery:	90.41%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30195375005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195375005DUP	
Sample Result (pCi/L, g, F):	0.007	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.180	
Sample Duplicate Result (pCi/L, g, F):	-0.021	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.173	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.222	30195375005
Duplicate RPD:	-394.78%	30195375005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZI0270
September 16, 2016
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB-2-9-8-16	AZI0270-01	DI Water	09/08/16 08:50	09/09/16 09:30
BRGWC-32S	AZI0270-02	Ground Water	09/08/16 09:50	09/09/16 09:30
BRGWC-34S	AZI0270-03	Ground Water	09/08/16 11:25	09/09/16 09:30
BRGWC-27I	AZI0270-04	Ground Water	09/08/16 12:40	09/09/16 09:30
FB-2-9-8-16	AZI0270-05	DI Water	09/08/16 13:25	09/09/16 09:30
BRGWC-29I	AZI0270-06	Ground Water	09/08/16 13:40	09/09/16 09:30
BRGWC-25I	AZI0270-07	Ground Water	09/08/16 14:45	09/09/16 09:30

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: EB-2-9-8-16
Date/Time Sampled: 9/8/2016 8:50:00AM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0270-01
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	09/14/16 15:11	09/15/16 02:02	6090370	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 02:02	6090370	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 02:02	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:07	6090322	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Calcium	0.0629	0.500	0.0311	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:25	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 16:45	6090244	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: BRGWC-32S
Date/Time Sampled: 9/8/2016 9:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0270-02
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	607	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	6.8	0.25	0.01	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 02:23	6090370	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	09/14/16 15:11	09/15/16 02:23	6090370	RLC
Sulfate	370	10	0.51	mg/L	EPA 300.0		10	09/14/16 15:11	09/16/16 08:40	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Barium	0.0593	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:12	6090322	CSW
Boron	1.28	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Calcium	60.5	5.00	0.311	mg/L	EPA 6020B		10	09/14/16 09:20	09/16/16 15:41	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Cobalt	0.0025	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:31	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 16:48	6090244	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: BRGWC-34S
Date/Time Sampled: 9/8/2016 11:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0270-03
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	663	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 02:44	6090370	RLC
Fluoride	0.17	0.30	0.02	mg/L	EPA 300.0	J	1	09/14/16 15:11	09/15/16 02:44	6090370	RLC
Sulfate	420	10	0.51	mg/L	EPA 300.0		10	09/14/16 15:11	09/16/16 09:02	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Barium	0.0415	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/16/16 15:16	6090322	CSW
Boron	1.89	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Calcium	97.3	25.0	1.55	mg/L	EPA 6020B		50	09/14/16 09:20	09/16/16 15:47	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Cobalt	0.0029	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:37	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 16:50	6090244	MTC

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: BRGWC-27I
Date/Time Sampled: 9/8/2016 12:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0270-04
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	478	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 03:04	6090370	RLC
Fluoride	0.31	0.30	0.02	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 03:04	6090370	RLC
Sulfate	300	10	0.51	mg/L	EPA 300.0		10	09/14/16 15:11	09/16/16 09:24	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Barium	0.0184	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/16/16 15:20	6090322	CSW
Boron	1.63	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Cadmium	0.00007	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Calcium	87.2	5.00	0.311	mg/L	EPA 6020B		10	09/14/16 09:20	09/16/16 15:53	6090322	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Cobalt	0.0149	0.0100	0.0005	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Selenium	0.0043	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Lithium	0.0021	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:43	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 16:52	6090244	MTC

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: FB-2-9-8-16
Date/Time Sampled: 9/8/2016 1:25:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0270-05
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	J	1	09/14/16 15:11	09/15/16 05:30	6090370	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 05:30	6090370	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 05:30	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:25	6090322	CSW
Boron	0.0106	0.100	0.0064	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:48	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 16:55	6090244	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: BRGWC-29I
Date/Time Sampled: 9/8/2016 1:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0270-06
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	654	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	6.4	0.25	0.01	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 05:51	6090370	RLC
Fluoride	0.20	0.30	0.02	mg/L	EPA 300.0	J	1	09/14/16 15:11	09/15/16 05:51	6090370	RLC
Sulfate	460	10	0.51	mg/L	EPA 300.0		10	09/14/16 15:11	09/16/16 09:46	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Barium	0.0199	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Beryllium	0.0011	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/16/16 15:29	6090322	CSW
Boron	1.35	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Calcium	93.9	5.00	0.311	mg/L	EPA 6020B		10	09/14/16 09:20	09/16/16 15:59	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Cobalt	0.0122	0.0100	0.0005	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Lead	0.0004	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Selenium	0.0039	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Lithium	0.0040	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 00:54	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 17:02	6090244	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270
Client ID: BRGWC-25I
Date/Time Sampled: 9/8/2016 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0270-07
Date/Time Received: 9/9/2016 9:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	460	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
Inorganic Anions											
Chloride	5.5	0.25	0.01	mg/L	EPA 300.0		1	09/14/16 15:11	09/15/16 06:12	6090370	RLC
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	09/14/16 15:11	09/15/16 06:12	6090370	RLC
Sulfate	280	10	0.51	mg/L	EPA 300.0		10	09/14/16 15:11	09/16/16 10:08	6090370	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Barium	0.0378	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:33	6090322	CSW
Boron	1.03	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Calcium	59.4	5.00	0.311	mg/L	EPA 6020B		10	09/14/16 09:20	09/16/16 16:04	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Cobalt	0.0073	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:00	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 17:04	6090244	MTC

PACE ANALYTICAL SERVICES, INC.

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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090305 - SM 2540 C											
Blank (6090305-BLK1)						Prepared & Analyzed: 09/13/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6090305-BS1)						Prepared & Analyzed: 09/13/16					
Total Dissolved Solids	388	10	10	mg/L	400.00		97	84-108			
Duplicate (6090305-DUP1)		**Source: AZI0282-02**				Prepared & Analyzed: 09/13/16					
Total Dissolved Solids	295	10	10	mg/L		293			0.7	10	
Duplicate (6090305-DUP2)		**Source: AZI0284-05**				Prepared & Analyzed: 09/13/16					
Total Dissolved Solids	216	10	10	mg/L		201			7	10	

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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090370 - EPA 300.0											
Blank (6090370-BLK1)						Prepared & Analyzed: 09/14/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6090370-BS1)						Prepared & Analyzed: 09/14/16					
Chloride	9.80	0.25	0.01	mg/L	10.010		98	90-110			
Fluoride	9.99	0.30	0.02	mg/L	10.010		100	90-110			
Sulfate	9.86	1.0	0.05	mg/L	10.010		99	90-110			
Matrix Spike (6090370-MS1)		**Source: AZI0270-04**				Prepared: 09/14/16 Analyzed: 09/15/16					
Chloride	15.7	0.25	0.01	mg/L	10.010	5.97	98	90-110			
Fluoride	10.8	0.30	0.02	mg/L	10.010	0.31	105	90-110			
Sulfate	221	1.0	0.05	mg/L	10.010	231	NR	90-110			QM-05
Matrix Spike (6090370-MS2)		**Source: AZI0270-07**				Prepared: 09/14/16 Analyzed: 09/15/16					
Chloride	15.6	0.25	0.01	mg/L	10.010	5.51	101	90-110			
Fluoride	10.3	0.30	0.02	mg/L	10.010	0.14	102	90-110			
Sulfate	220	1.0	0.05	mg/L	10.010	215	58	90-110			QM-05
Matrix Spike Dup (6090370-MSD1)		**Source: AZI0270-04**				Prepared: 09/14/16 Analyzed: 09/15/16					
Chloride	15.8	0.25	0.01	mg/L	10.010	5.97	98	90-110	0.4	15	
Fluoride	10.7	0.30	0.02	mg/L	10.010	0.31	104	90-110	0.5	15	
Sulfate	221	1.0	0.05	mg/L	10.010	231	NR	90-110	0.09	15	QM-05

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090244 - EPA 7470A											
Blank (6090244-BLK1)						Prepared & Analyzed: 09/12/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090244-BS1)						Prepared & Analyzed: 09/12/16					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
Matrix Spike (6090244-MS1)			**Source: AZI0269-04**			Prepared & Analyzed: 09/12/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125			
Matrix Spike Dup (6090244-MSD1)			**Source: AZI0269-04**			Prepared & Analyzed: 09/12/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	0.06	20	
Post Spike (6090244-PS1)			**Source: AZI0269-04**			Prepared & Analyzed: 09/12/16					
Mercury	1.78			ug/L	1.6667	0.0139	106	80-120			
Batch 6090322 - EPA 3005A											
Blank (6090322-BLK1)						Prepared & Analyzed: 09/14/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090322 - EPA 3005A											
LCS (6090322-BS1)						Prepared & Analyzed: 09/14/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.0992	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0991	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.0963	0.0030	0.00008	mg/L	0.10000		96	80-120			
Boron	1.04	0.100	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.0975	0.0010	0.00007	mg/L	0.10000		97	80-120			
Calcium	1.08	0.500	0.0311	mg/L	1.0000		108	80-120			
Chromium	0.0960	0.0100	0.0009	mg/L	0.10000		96	80-120			
Cobalt	0.0964	0.0100	0.0005	mg/L	0.10000		96	80-120			
Copper	0.0942	0.0250	0.0005	mg/L	0.10000		94	80-120			
Lead	0.0979	0.0050	0.0001	mg/L	0.10000		98	80-120			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000		101	80-120			
Nickel	0.0968	0.0100	0.0006	mg/L	0.10000		97	80-120			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000		103	80-120			
Silver	0.0980	0.0100	0.0005	mg/L	0.10000		98	80-120			
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000		97	80-120			
Vanadium	0.0962	0.0100	0.0071	mg/L	0.10000		96	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			
Matrix Spike (6090322-MS1)			**Source: AZI0269-05**			Prepared & Analyzed: 09/14/16					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.120	0.0100	0.0004	mg/L	0.10000	0.0242	96	75-125			
Beryllium	0.0890	0.0030	0.00008	mg/L	0.10000	ND	89	75-125			
Boron	0.968	0.100	0.0064	mg/L	1.0000	ND	97	75-125			
Cadmium	0.0982	0.0010	0.00007	mg/L	0.10000	ND	98	75-125			
Calcium	27.6	0.500	0.155	mg/L	1.0000	26.8	84	75-125			
Chromium	0.0959	0.0100	0.0009	mg/L	0.10000	ND	96	75-125			
Cobalt	0.0943	0.0100	0.0005	mg/L	0.10000	ND	94	75-125			
Copper	0.0933	0.0250	0.0005	mg/L	0.10000	ND	93	75-125			
Lead	0.0970	0.0050	0.0001	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000	ND	101	75-125			
Nickel	0.0938	0.0100	0.0006	mg/L	0.10000	ND	94	75-125			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125			
Silver	0.0948	0.0100	0.0005	mg/L	0.10000	ND	95	75-125			
Thallium	0.0969	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.0966	0.0100	0.0071	mg/L	0.10000	ND	97	75-125			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125			
Lithium	0.0939	0.0500	0.0021	mg/L	0.10000	ND	94	75-125			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0270

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090322 - EPA 3005A											
Matrix Spike Dup (6090322-MSD1)		**Source: AZI0269-05**			Prepared & Analyzed: 09/14/16						
Antimony	0.104	0.0030	0.0008	mg/L	0.10000	ND	104	75-125	0.6	20	
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125	0.005	20	
Barium	0.122	0.0100	0.0004	mg/L	0.10000	0.0242	97	75-125	2	20	
Beryllium	0.0918	0.0030	0.00008	mg/L	0.10000	ND	92	75-125	3	20	
Boron	0.986	0.100	0.0064	mg/L	1.0000	ND	99	75-125	2	20	
Cadmium	0.0965	0.0010	0.00007	mg/L	0.10000	ND	97	75-125	2	20	
Calcium	26.6	0.500	0.155	mg/L	1.0000	26.8	NR	75-125	4	20	QM-02
Chromium	0.0975	0.0100	0.0009	mg/L	0.10000	ND	97	75-125	2	20	
Cobalt	0.0951	0.0100	0.0005	mg/L	0.10000	ND	95	75-125	0.9	20	
Copper	0.0930	0.0250	0.0005	mg/L	0.10000	ND	93	75-125	0.3	20	
Lead	0.0965	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	0.5	20	
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125	0.7	20	
Nickel	0.0941	0.0100	0.0006	mg/L	0.10000	ND	94	75-125	0.3	20	
Selenium	0.0988	0.0100	0.0010	mg/L	0.10000	ND	99	75-125	3	20	
Silver	0.0970	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Thallium	0.0967	0.0010	0.0002	mg/L	0.10000	ND	97	75-125	0.2	20	
Vanadium	0.0955	0.0100	0.0071	mg/L	0.10000	ND	95	75-125	1	20	
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125	0.4	20	
Lithium	0.0960	0.0500	0.0021	mg/L	0.10000	ND	96	75-125	2	20	
Post Spike (6090322-PS1)		**Source: AZI0269-05**			Prepared & Analyzed: 09/14/16						
Antimony	94.5			ug/L	100.00	0.368	94	80-120			
Arsenic	100			ug/L	100.00	0.0511	100	80-120			
Barium	122			ug/L	100.00	24.2	98	80-120			
Beryllium	92.5			ug/L	100.00	0.0060	93	80-120			
Boron	952			ug/L	1000.0	5.24	95	80-120			
Cadmium	101			ug/L	100.00	-0.0105	101	80-120			
Calcium	28000			ug/L	1000.0	26800	118	80-120			
Chromium	99.3			ug/L	100.00	0.862	98	80-120			
Cobalt	97.5			ug/L	100.00	0.0548	97	80-120			
Copper	93.7			ug/L	100.00	0.0786	94	80-120			
Lead	96.3			ug/L	100.00	0.0261	96	80-120			
Molybdenum	102			ug/L	100.00	0.784	102	80-120			
Nickel	94.5			ug/L	100.00	0.0913	94	80-120			
Selenium	96.5			ug/L	100.00	-0.0345	96	80-120			
Silver	97.1			ug/L	100.00	0.0057	97	80-120			
Thallium	96.6			ug/L	100.00	0.0625	97	80-120			
Vanadium	98.0			ug/L	100.00	0.172	98	80-120			
Zinc	103			ug/L	100.00	1.20	102	80-120			
Lithium	97.0			ug/L	100.00	0.571	96	80-120			

PACE ANALYTICAL SERVICES, INC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase 2 CCR

ANALYSIS REQUESTED

Collection DATE mm/dd/yy	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE								P	P	P	P					
PRESERVATION								3	7	3						
9/8/16	0850	W		✓	EB-2-9-8-16	3		1	1	1						1
9/8/16	0950	GW		✓	BRGWC-32S	3		1	1	1						2
9/8/16	1125	GW		✓	BRGWC-34S	3		1	1	1						3
9/8/16	1240	GW		✓	BRGWC-27I XX1	3		1	1	1						4
9/8/16	1325	W		✓	FB-2-9-8-16	3		1	1	1						5
9/8/16	1340	GW		✓	BRGWC-29I	3		1	1	1						6
9/8/16	1445	GW		✓	BRGWC-25I	4		1	1	2						7

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER
PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: [signature] (ACC) — DATE/TIME: 9/8/16 1500
RECEIVED BY: — DATE/TIME:
RECEIVED BY LAB: [signature] — DATE/TIME: 09/09/16 0930

RELINQUISHED BY: [signature] — DATE/TIME: 9/9/16 0930
RELINQUISHED BY: — DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Checked: Yes No NA — Ice: Yes No NA — Temperature: Min: 1°C Max: 1°C
Custody Seal: Intact Broken Not Present — # of Coolers — Cooler ID:

FOR LAB USE ONLY
LAB #: AZI0270
Entered into LIMS: mz
Tracking #:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 9/16/2016 7:06:45PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/09/16 09:30

Work Order: AZI0270
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 7 **#Containers:** 22

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 07, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch AP
Pace Project No.: 30195633

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on September 12, 2016. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch AP
Pace Project No.: 30195633

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch AP
Pace Project No.: 30195633

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195633001	**EB-2-9-8-16**	Water	09/08/16 08:50	09/12/16 09:25
30195633002	**BRGWC-32S**	Water	09/08/16 09:50	09/12/16 09:25
30195633003	**BRGWC-34S**	Water	09/08/16 11:25	09/12/16 09:25
30195633004	**BRGWC-27S**	Water	09/08/16 12:40	09/12/16 09:25
30195633005	**FB-2-9-8-16**	Water	09/08/16 13:25	09/12/16 09:25
30195633006	**BRGWC-29I**	Water	09/08/16 13:40	09/12/16 09:25
30195633007	**BRGWC-25I**	Water	09/08/16 14:45	09/12/16 09:25

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: Plant Branch AP
Pace Project No.: 30195633

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195633001	**EB-2-9-8-16**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195633002	**BRGWC-32S**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195633003	**BRGWC-34S**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195633004	**BRGWC-27S**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195633005	**FB-2-9-8-16**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195633006	**BRGWC-29I**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195633007	**BRGWC-25I**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195633

Sample: EB-2-9-8-16 **Lab ID: 30195633001** Collected: 09/08/16 08:50 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0215 ± 0.147 (0.390) C:91% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**0.616 ± 0.453 (0.875) C:70% T:71%**	pCi/L	09/30/16 16:41	15262-20-1	
Total Radium	Total Radium Calculation	**0.638 ± 0.600 (1.27)**	pCi/L	10/07/16 15:58	7440-14-4	

Sample: BRGWC-32S **Lab ID: 30195633002** Collected: 09/08/16 09:50 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0496 ± 0.185 (0.464) C:86% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**0.766 ± 0.399 (0.697) C:76% T:84%**	pCi/L	09/30/16 16:41	15262-20-1	
Total Radium	Total Radium Calculation	**0.816 ± 0.584 (1.16)**	pCi/L	10/07/16 15:58	7440-14-4	

Sample: BRGWC-34S **Lab ID: 30195633003** Collected: 09/08/16 11:25 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.327 ± 0.245 (0.409) C:85% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**1.70 ± 0.646 (0.987) C:62% T:81%**	pCi/L	09/30/16 16:41	15262-20-1	
Total Radium	Total Radium Calculation	**2.03 ± 0.891 (1.40)**	pCi/L	10/07/16 15:58	7440-14-4	

Sample: BRGWC-27S **Lab ID: 30195633004** Collected: 09/08/16 12:40 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.142 ± 0.234 (0.523) C:84% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**1.60 ± 0.588 (0.877) C:73% T:78%**	pCi/L	09/30/16 16:41	15262-20-1	
Total Radium	Total Radium Calculation	**1.74 ± 0.822 (1.40)**	pCi/L	10/07/16 15:58	7440-14-4	

Sample: FB-2-9-8-16 **Lab ID: 30195633005** Collected: 09/08/16 13:25 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.128 ± 0.107 (0.436) C:89% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**0.746 ± 0.533 (1.04) C:66% T:76%**	pCi/L	09/30/16 16:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195633

Sample: FB-2-9-8-16 **Lab ID: 30195633005** Collected: 09/08/16 13:25 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.746 ± 0.640 (1.48)**	pCi/L	10/07/16 15:58	7440-14-4	

Sample: BRGWC-29I **Lab ID: 30195633006** Collected: 09/08/16 13:40 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.312 ± 0.257 (0.457) C:82% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**2.46 ± 0.746 (0.955) C:64% T:87%**	pCi/L	09/30/16 16:41	15262-20-1	
Total Radium	Total Radium Calculation	**0.540 ± 0.661 (1.44)**	pCi/L	10/07/16 16:09	7440-14-4	

Sample: BRGWC-25I **Lab ID: 30195633007** Collected: 09/08/16 14:45 Received: 09/12/16 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.296 ± 0.247 (0.427) C:78% T:NA**	pCi/L	09/30/16 09:54	13982-63-3	
Radium-228	EPA 9320	**0.344 ± 0.405 (0.852) C:74% T:86%**	pCi/L	09/30/16 12:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.471 ± 0.587 (1.21)**	pCi/L	10/07/16 16:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195633

QC Batch: 234042 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195633001, 30195633002, 30195633003, 30195633004, 30195633005, 30195633006, 30195633007

METHOD BLANK: 1147792 Matrix: Water
Associated Lab Samples: 30195633001, 30195633002, 30195633003, 30195633004, 30195633005, 30195633006, 30195633007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0647 ± 0.343 (0.786) C:72% T:88%	pCi/L	09/30/16 12:31	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch AP
Pace Project No.: 30195633

QC Batch: 234040 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195633001, 30195633002, 30195633003, 30195633004, 30195633005, 30195633006, 30195633007

METHOD BLANK: 1147790 Matrix: Water
Associated Lab Samples: 30195633001, 30195633002, 30195633003, 30195633004, 30195633005, 30195633006, 30195633007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0483 ± 0.124 (0.304) C:92% T:NA	pCi/L	09/30/16 09:54	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant Branch AP
Pace Project No.: 30195633

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.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase 2 CCR

ANALYSIS REQUESTED

Collection DATE m/d/yy	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:							P	P	P	P
PRESERVATION:							3	7	3	
9/8/16	0850	W		✓	EB-2-9-8-16	3	1	1	1	001
9/8/16	0950	GW		✓	BRGWC-32S	3	1	1	1	002
9/8/16	1125	GW		✓	BRGWC-34S	3	1	1	1	003
9/8/16	1240	GW		✓	BRGWC-27S	3	1	1	1	004
9/8/16	1325	W		✓	FB-2-9-8-16	3	1	1	1	005
9/8/16	1340	GW		✓	BRGWC-29I	3	1	1	1	006
9/8/16	1445	GW		✓	BRGWC-25I	4	1	1	2	007

WO#:30195633

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: C. Park (AQ) — DATE/TIME: 9/8/16 1500
RELINQUISHED BY: C. Park — DATE/TIME: 9/9/16 0930
RECEIVED BY: Karen E. Tice — DATE/TIME: 9-12-16 0925
RELINQUISHED BY: — DATE/TIME:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:

RECEIVED BY LAB: — DATE/TIME:
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Tracking #:
pH checked: Yes P No NA — Ice: Yes No NA — Temperature: Min: Max:
Custody Seal: Intact Broken Not Present — # of Coolers: — Cooler ID:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, Georgia Project # 30195633

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 6812 5099 0481

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals Intact: ☐ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 9-12-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT		✓		5. Sample ID for one of the bottles in sample 7 says "2nd Rad Bottle". Time and date match.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13.
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH / Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present:			✓	15.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH / Date: 9-12-16

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	10/3/2016
Worklist:	31519
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1147790
MB concentration:	0.048
M/B Counting Uncertainty:	0.124
MB MDC:	0.304
MB Numerical Performance Indicator:	0.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31519	LCSD31519
Count Date:	9/30/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.677	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.517	
Target Conc. (pCi/L, g, F):	8.635	
Uncertainty (Calculated):	0.406	
Result (pCi/L, g, F):	7.775	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.880	
Numerical Performance Indicator:	-1.74	
Percent Recovery:	90.05%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30195633007	
Duplicate Sample I.D.	30195633007DUP	
Sample Result (pCi/L, g, F):	0.296	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.244	
Sample Duplicate Result (pCi/L, g, F):	0.148	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.230	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.864	30195633007
Duplicate RPD:	66.56%	30195633007DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	9/26/2016
Worklist:	31521
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1147792
MB concentration:	0.065
M/B Counting Uncertainty:	0.343
MB MDC:	0.786
MB Numerical Performance Indicator:	0.37
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)? LCS31521	N LCSD31521
Count Date:	9/30/2016	
Spike I.D.:	16-025	
Spike Concentration (pCi/mL):	25.540	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.807	
Target Conc. (pCi/L, g, F):	6.328	
Uncertainty (Calculated):	0.456	
Result (pCi/L, g, F):	6.520	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.814	
Numerical Performance Indicator:	0.41	
Percent Recovery:	103.05%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30195633007	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195633007DUP	
Sample Result (pCi/L, g, F):	0.344	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.401	
Sample Duplicate Result (pCi/L, g, F):	0.396	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.433	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.172	30195633007
Duplicate RPD:	14.02%	30195633007DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

LABORATORY ANALYTICAL DATA

November 2016

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZK0600
December 05, 2016
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-5I	AZK0600-01	Ground Water	11/16/16 09:21	11/17/16 13:50
BRGWA-2S	AZK0600-02	Ground Water	11/16/16 11:06	11/17/16 13:50
BRGWA-2I	AZK0600-03	Ground Water	11/16/16 14:46	11/17/16 13:50
BRGWA-12S	AZK0600-04	Ground Water	11/16/16 14:04	11/17/16 13:50
BRGWA-12I	AZK0600-05	Ground Water	11/16/16 17:22	11/17/16 13:50

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600
Client ID: BRGWA-5I
Date/Time Sampled: 11/16/2016 9:21:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0600-01
Date/Time Received: 11/17/2016 1:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	77	25	10	mg/L	SM 2540 C		1	11/18/16 14:30	11/18/16 14:30	6110490	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.01	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 12:44	6110512	RLC
Fluoride	0.03	0.30	0.02	mg/L	EPA 300.0	J	1	11/18/16 15:35	11/20/16 12:44	6110512	RLC
Sulfate	3.4	1.0	0.05	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 12:44	6110512	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Barium	0.0365	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:01	6110508	CSW
Boron	0.0187	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Calcium	14.9	2.50	0.155	mg/L	EPA 6020B		5	11/21/16 10:15	12/01/16 13:59	6110508	CSW
Chromium	0.0051	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Molybdenum	0.0038	0.0100	0.0017	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Lithium	0.0033	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:26	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:08	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600
Client ID: BRGWA-2S
Date/Time Sampled: 11/16/2016 11:06:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0600-02
Date/Time Received: 11/17/2016 1:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	41	25	10	mg/L	SM 2540 C		1	11/18/16 14:30	11/18/16 14:30	6110490	JPT
Inorganic Anions											
Chloride	1.8	0.25	0.01	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 13:06	6110512	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	11/18/16 15:35	11/20/16 13:06	6110512	RLC
Sulfate	0.36	1.0	0.05	mg/L	EPA 300.0	J	1	11/18/16 15:35	11/20/16 13:06	6110512	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Barium	0.0102	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:18	6110508	CSW
Boron	0.0109	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Calcium	4.25	0.500	0.0311	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Chromium	0.0029	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 19:18	6110508	CSW
Cobalt	0.0030	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 19:18	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:43	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:10	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600
Client ID: BRGWA-2I
Date/Time Sampled: 11/16/2016 2:46:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0600-03
Date/Time Received: 11/17/2016 1:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	69	25	10	mg/L	SM 2540 C		1	11/18/16 14:30	11/18/16 14:30	6110490	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 13:27	6110512	RLC
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	11/18/16 15:35	11/20/16 13:27	6110512	RLC
Sulfate	6.6	1.0	0.05	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 13:27	6110512	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Barium	0.0147	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:24	6110508	CSW
Boron	0.0117	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Calcium	12.1	2.50	0.155	mg/L	EPA 6020B		5	11/21/16 10:15	12/01/16 14:05	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:24	6110508	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 19:24	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Lithium	0.0201	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:49	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:13	6110560	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600
Client ID: BRGWA-12S
Date/Time Sampled: 11/16/2016 2:04:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0600-04
Date/Time Received: 11/17/2016 1:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	100	25	10	mg/L	SM 2540 C		1	11/18/16 14:30	11/18/16 14:30	6110490	JPT
Inorganic Anions											
Chloride	3.6	0.25	0.01	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 13:48	6110512	RLC
Fluoride	0.03	0.30	0.02	mg/L	EPA 300.0	J	1	11/18/16 15:35	11/20/16 13:48	6110512	RLC
Sulfate	1.2	1.0	0.05	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 13:48	6110512	RLC
Metals, Total											
Antimony	0.0011	0.0030	0.0008	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Barium	0.0509	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:29	6110508	CSW
Boron	0.0081	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Calcium	4.17	0.500	0.0311	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 19:29	6110508	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:29	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 22:54	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:15	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600
Client ID: BRGWA-12I
Date/Time Sampled: 11/16/2016 5:22:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0600-05
Date/Time Received: 11/17/2016 1:50:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	100	25	10	mg/L	SM 2540 C		1	11/18/16 14:30	11/18/16 14:30	6110490	JPT
Inorganic Anions											
Chloride	3.6	0.25	0.01	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 15:34	6110512	RLC
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	11/18/16 15:35	11/20/16 15:34	6110512	RLC
Sulfate	3.6	1.0	0.05	mg/L	EPA 300.0		1	11/18/16 15:35	11/20/16 15:34	6110512	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Barium	0.0623	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:35	6110508	CSW
Boron	0.0127	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Calcium	15.4	2.50	0.155	mg/L	EPA 6020B		5	11/21/16 10:15	12/01/16 14:11	6110508	CSW
Chromium	0.0015	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 19:35	6110508	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:35	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Lithium	0.0054	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:00	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:17	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

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December 05, 2016

Report No.: AZK0600

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110490 - SM 2540 C											
Blank (6110490-BLK1)						Prepared & Analyzed: 11/18/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6110490-BS1)						Prepared & Analyzed: 11/18/16					
Total Dissolved Solids	382	25	10	mg/L	400.00		96	84-108			
Duplicate (6110490-DUP1)		**Source: AZK0570-03**				Prepared & Analyzed: 11/18/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (6110490-DUP2)		**Source: AZK0570-04**				Prepared & Analyzed: 11/18/16					
Total Dissolved Solids	110	25	10	mg/L		112			2	10	

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Report No.: AZK0600

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110512 - EPA 300.0											
Blank (6110512-BLK1)						Prepared: 11/18/16 Analyzed: 11/20/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6110512-BS1)						Prepared: 11/18/16 Analyzed: 11/20/16					
Chloride	10.3	0.25	0.01	mg/L	10.010		103	90-110			
Fluoride	10.3	0.30	0.02	mg/L	10.020		103	90-110			
Sulfate	10.1	1.0	0.05	mg/L	10.020		101	90-110			
Matrix Spike (6110512-MS1)		**Source: AZK0545-01**				Prepared: 11/18/16 Analyzed: 11/20/16					
Chloride	11.5	0.25	0.01	mg/L	10.010	2.34	91	90-110			
Fluoride	9.23	0.30	0.02	mg/L	10.020	0.04	92	90-110			
Sulfate	9.46	1.0	0.05	mg/L	10.020	0.49	90	90-110			
Matrix Spike (6110512-MS2)		**Source: AZK0637-01**				Prepared: 11/18/16 Analyzed: 11/20/16					
Chloride	10.5	0.25	0.01	mg/L	10.010	1.17	93	90-110			
Fluoride	9.72	0.30	0.02	mg/L	10.020	0.02	97	90-110			
Sulfate	11.1	1.0	0.05	mg/L	10.020	1.85	92	90-110			
Matrix Spike Dup (6110512-MSD1)		**Source: AZK0545-01**				Prepared: 11/18/16 Analyzed: 11/20/16					
Chloride	12.2	0.25	0.01	mg/L	10.010	2.34	98	90-110	6	15	
Fluoride	10.0	0.30	0.02	mg/L	10.020	0.04	99	90-110	8	15	
Sulfate	10.2	1.0	0.05	mg/L	10.020	0.49	96	90-110	7	15	

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December 05, 2016

Report No.: AZK0600

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110508 - EPA 3005A											
Blank (6110508-BLK1)						Prepared: 11/21/16 Analyzed: 11/23/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6110508-BS1)						Prepared: 11/21/16 Analyzed: 11/23/16					
Antimony	0.114	0.0030	0.0008	mg/L	0.10000		114	80-120			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000		105	80-120			
Barium	0.103	0.0100	0.0004	mg/L	0.10000		103	80-120			
Beryllium	0.0973	0.0030	0.00008	mg/L	0.10000		97	80-120			
Boron	0.978	0.0400	0.0064	mg/L	1.0000		98	80-120			
Cadmium	0.106	0.0010	0.00007	mg/L	0.10000		106	80-120			
Calcium	1.10	0.500	0.0311	mg/L	1.0000		110	80-120			
Chromium	0.107	0.0100	0.0009	mg/L	0.10000		107	80-120			
Cobalt	0.108	0.0100	0.0005	mg/L	0.10000		108	80-120			
Copper	0.103	0.0250	0.0005	mg/L	0.10000		103	80-120			
Lead	0.106	0.0050	0.0001	mg/L	0.10000		106	80-120			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000		109	80-120			
Nickel	0.105	0.0100	0.0006	mg/L	0.10000		105	80-120			
Selenium	0.116	0.0100	0.0010	mg/L	0.10000		116	80-120			
Silver	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000		104	80-120			
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000		105	80-120			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000		108	80-120			
Lithium	0.0972	0.0500	0.0021	mg/L	0.10000		97	80-120			

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110508 - EPA 3005A											
Matrix Spike (6110508-MS1)		**Source: AZK0570-01**			Prepared: 11/21/16 Analyzed: 11/23/16						
Antimony	0.114	0.0030	0.0008	mg/L	0.10000	ND	114	75-125			
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	ND	109	75-125			
Barium	0.141	0.0100	0.0004	mg/L	0.10000	0.0365	104	75-125			
Beryllium	0.0932	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	2.83	2.00	0.321	mg/L	1.0000	2.03	80	75-125			
Cadmium	0.0998	0.0010	0.00007	mg/L	0.10000	ND	100	75-125			
Calcium	107	25.0	1.55	mg/L	1.0000	107	NR	75-125			QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125			
Cobalt	0.116	0.0100	0.0005	mg/L	0.10000	0.0145	101	75-125			
Copper	0.0931	0.0250	0.0005	mg/L	0.10000	ND	93	75-125			
Lead	0.0987	0.0050	0.0001	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125			
Nickel	0.108	0.0100	0.0006	mg/L	0.10000	0.0109	97	75-125			
Selenium	0.116	0.0100	0.0010	mg/L	0.10000	ND	116	75-125			
Silver	0.0975	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0997	0.0010	0.0002	mg/L	0.10000	ND	100	75-125			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	0.0024	99	75-125			
Lithium	0.0949	0.0500	0.0021	mg/L	0.10000	0.0075	87	75-125			
Matrix Spike Dup (6110508-MSD1)		**Source: AZK0570-01**			Prepared: 11/21/16 Analyzed: 11/23/16						
Antimony	0.115	0.0030	0.0008	mg/L	0.10000	ND	115	75-125	1	20	
Arsenic	0.110	0.0050	0.0016	mg/L	0.10000	ND	110	75-125	0.6	20	
Barium	0.140	0.0100	0.0004	mg/L	0.10000	0.0365	103	75-125	0.7	20	
Beryllium	0.0916	0.0030	0.00008	mg/L	0.10000	ND	92	75-125	2	20	
Boron	2.80	2.00	0.321	mg/L	1.0000	2.03	77	75-125	0.9	20	
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125	2	20	
Calcium	106	25.0	1.55	mg/L	1.0000	107	NR	75-125	1	20	QM-02
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	3	20	
Cobalt	0.112	0.0100	0.0005	mg/L	0.10000	0.0145	97	75-125	3	20	
Copper	0.0953	0.0250	0.0005	mg/L	0.10000	ND	95	75-125	2	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	ND	101	75-125	2	20	
Molybdenum	0.114	0.0100	0.0017	mg/L	0.10000	ND	114	75-125	3	20	
Nickel	0.107	0.0100	0.0006	mg/L	0.10000	0.0109	97	75-125	0.7	20	
Selenium	0.120	0.0100	0.0010	mg/L	0.10000	ND	120	75-125	3	20	
Silver	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.101	0.0010	0.0002	mg/L	0.10000	ND	101	75-125	1	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	0.08	20	
Zinc	0.102	0.0100	0.0021	mg/L	0.10000	0.0024	99	75-125	0.5	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	0.0075	94	75-125	7	20	

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110508 - EPA 3005A											
Post Spike (6110508-PS1)		**Source: AZK0570-01**				Prepared: 11/21/16 Analyzed: 11/23/16					
Antimony	112			ug/L	100.00	0.240	111	80-120			
Arsenic	106			ug/L	100.00	0.856	105	80-120			
Barium	135			ug/L	100.00	36.5	99	80-120			
Beryllium	94.1			ug/L	100.00	0.0351	94	80-120			
Boron	2720			ug/L	1000.0	2030	69	80-120			QM-02
Cadmium	97.9			ug/L	100.00	0.0406	98	80-120			
Calcium	104000			ug/L	1000.0	107000	NR	80-120			QM-02
Chromium	102			ug/L	100.00	0.298	102	80-120			
Cobalt	113			ug/L	100.00	14.5	99	80-120			
Copper	93.4			ug/L	100.00	0.0318	93	80-120			
Lead	95.7			ug/L	100.00	0.0679	96	80-120			
Molybdenum	108			ug/L	100.00	0.953	107	80-120			
Nickel	110			ug/L	100.00	10.9	99	80-120			
Selenium	117			ug/L	100.00	0.746	116	80-120			
Silver	97.5			ug/L	100.00	0.0337	97	80-120			
Thallium	97.9			ug/L	100.00	0.125	98	80-120			
Vanadium	107			ug/L	100.00	-0.396	107	80-120			
Zinc	104			ug/L	100.00	2.37	101	80-120			
Lithium	104			ug/L	100.00	7.51	97	80-120			
Batch 6110560 - EPA 7470A											
Blank (6110560-BLK1)						Prepared & Analyzed: 11/22/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6110560-BS1)						Prepared & Analyzed: 11/22/16					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0600

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110560 - EPA 7470A											
Matrix Spike (6110560-MS1)			**Source: AZK0639-05**			Prepared & Analyzed: 11/22/16					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (6110560-MSD1)			**Source: AZK0639-05**			Prepared & Analyzed: 11/22/16					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125	0.9	20	
Post Spike (6110560-PS1)			**Source: AZK0639-05**			Prepared & Analyzed: 11/22/16					
Mercury	1.69			ug/L	1.6667	-0.00940	102	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE: —

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: WB ~~State~~ CCR

ANALYSIS REQUESTED:

	Container type	Preservation	Analysis
A	P	3	Metals App. III and IV (EPA 6020/7470)
B	P	7	Cl, F, SO4, and TDS (EPA 300.0 and SM2540C)
C	P	3	Radium-226 and 228 (SW-846 9315/9320)

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III and IV	Cl, F, SO4, and TDS	Radium-226 and 228	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
11-16-16	0921	GW		✓	BRGWA-5I	3	1	1	1	1	
11-16-16	1106	GW		✓	BRGWA-2S	3	1	1	1	2	
11-16-16	1446	GW		✓	BRGWA-2I	3	1	1	1	3	
11-16-16	1404	GW		✓	BRGWA-12S	3	1	1	1	4	
11-16-16	1722	GW		✓	BRGWA-12I	3	1	1	1	5	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: William Ballow, Geologist, Golder — DATE/TIME: 11/16/16 / 1726

RELINQUISHED BY: William Ballow — DATE/TIME: 11-17-16 / 0800

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: Katie Hinks — DATE/TIME: 11/17/16 1350

Checked: No NA — Ice: (Yes) No NA — Temperature: 2°C Min: 2°C Max:

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

Custody Seal: (Intact) Broken Not Present — # of Coolers: 1 — Cooler ID:

FOR LAB USE ONLY — LAB #: AZK0600 — Entered into LIMS: — Tracking #:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 12/5/2016 2:27:24PM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 11/17/16 13:50

Work Order: AZK0600
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 5 **#Containers:** 15

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 27, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 30203114

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on November 18, 2016. 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.

This report replaces the December 20, 2016 report. Report reissued 12/27/16 to reflect correction of Client ID.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 30203114

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 30203114

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30203114001	**BRGWA-5I**	Water	11/16/16 09:21	11/18/16 11:40
30203114002	**BRGWA-2S**	Water	11/16/16 11:06	11/18/16 11:40
30203114003	**BRGWA-2I**	Water	11/16/16 14:46	11/18/16 11:40
30203114004	**BRGWA-12S**	Water	11/16/16 14:04	11/18/16 11:40
30203114005	**BRGWA-12I**	Water	11/16/16 17:22	11/18/16 11:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 30203114

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30203114001	**BRGWA-5I**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203114002	**BRGWA-2S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203114003	**BRGWA-2I**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203114004	**BRGWA-12S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203114005	**BRGWA-12I**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203114

Sample: BRGWA-5I **Lab ID: 30203114001** Collected: 11/16/16 09:21 Received: 11/18/16 11:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0396 ± 0.146 (0.375) C:78% T:NA**	pCi/L	12/07/16 10:57	13982-63-3	
Radium-228	EPA 9320	**0.453 ± 0.353 (0.663) C:63% T:92%**	pCi/L	12/16/16 19:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.493 ± 0.499 (1.04)**	pCi/L	12/19/16 16:59	7440-14-4	

Sample: BRGWA-2S **Lab ID: 30203114002** Collected: 11/16/16 11:06 Received: 11/18/16 11:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0627 ± 0.133 (0.312) C:85% T:NA**	pCi/L	12/07/16 10:57	13982-63-3	
Radium-228	EPA 9320	**0.367 ± 0.355 (0.688) C:64% T:86%**	pCi/L	12/16/16 19:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.430 ± 0.488 (1.000)**	pCi/L	12/19/16 16:59	7440-14-4	

Sample: BRGWA-2I **Lab ID: 30203114003** Collected: 11/16/16 14:46 Received: 11/18/16 11:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.199 ± 0.177 (0.308) C:89% T:NA**	pCi/L	12/07/16 10:57	13982-63-3	
Radium-228	EPA 9320	**0.625 ± 0.414 (0.754) C:61% T:89%**	pCi/L	12/16/16 19:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.824 ± 0.591 (1.06)**	pCi/L	12/19/16 16:59	7440-14-4	

Sample: BRGWA-12S **Lab ID: 30203114004** Collected: 11/16/16 14:04 Received: 11/18/16 11:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0937 ± 0.154 (0.341) C:92% T:NA**	pCi/L	12/07/16 10:57	13982-63-3	
Radium-228	EPA 9320	**0.769 ± 0.416 (0.714) C:60% T:86%**	pCi/L	12/16/16 19:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.863 ± 0.570 (1.06)**	pCi/L	12/19/16 16:59	7440-14-4	

Sample: BRGWA-12I **Lab ID: 30203114005** Collected: 11/16/16 17:22 Received: 11/18/16 11:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.141 ± 0.160 (0.313) C:92% T:NA**	pCi/L	12/07/16 10:57	13982-63-3	
Radium-228	EPA 9320	**0.658 ± 0.343 (0.578) C:68% T:92%**	pCi/L	12/16/16 19:18	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203114

Sample: BRGWA-12I **Lab ID: 30203114005** Collected: 11/16/16 17:22 Received: 11/18/16 11:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.799 ± 0.503 (0.891)**	pCi/L	12/19/16 16:59	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203114

QC Batch: 241712 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30203114001, 30203114002, 30203114003, 30203114004, 30203114005

METHOD BLANK: 1188126 Matrix: Water
Associated Lab Samples: 30203114001, 30203114002, 30203114003, 30203114004, 30203114005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.104 ± 0.157 (0.342) C:95% T:NA	pCi/L	12/07/16 09:29	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203114

QC Batch: 242657 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30203114001, 30203114002, 30203114003, 30203114004, 30203114005

METHOD BLANK: 1192648 Matrix: Water
Associated Lab Samples: 30203114001, 30203114002, 30203114003, 30203114004, 30203114005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0888 ± 0.377 (0.792) C:63% T:86%	pCi/L	12/16/16 19:19	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant Branch
Pace Project No.: 30203114

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.

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZK0600 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 12/20/2016

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	BRGWA-5I	G	11/16/2016 9:21	AZK0600-01	GW	1	X	001
2	BRGWA-2S	G	11/16/2016 11:06	AZK0600-02	GW	1	X	002
3	BRGWA-2I	G	11/16/2016 14:46	AZK0600-03	GW	1	X	003
4	BRGWA-12S	G	11/16/2016 14:04	AZK0600-04	GW	1	X	004
5	BRGWA-12I	G	11/16/2016 17:22	AZK0600-05	GW	1	X	005
6								
7								
8								
9								
10								

WO#:30203114

30203114

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Hill	11-18-16 1140	
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30203114

9509

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE: —

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: WB ~~State~~ CCR

ANALYSIS REQUESTED:

	Container type	Preservation	Analysis
A	P	3	Metals App. III and IV (EPA 6020/7470)
B	P	7	Cl, F, SO4, and TDS (EPA 300.0 and SM2540C)
C	P	3	Radium-226 and 228 (SW-846 9315/9320)

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	A	B	C	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
11-16-16	0921	GW		✓	BRGWA-5I	3	1	1	1	1	
11-16-16	1106	GW		✓	BRGWA-2S	3	1	1	1	2	
11-16-16	1446	GW		✓	BRGWA-2I	3	1	1	1	3	
11-16-16	1404	GW		✓	BRGWA-12S	3	1	1	1	4	
11-16-16	1722	GW		✓	BRGWA-12I	3	1	1	1	5	

CONTAINER TYPE:
- P - PLASTIC
- A - AMBER GLASS
- G - CLEAR GLASS
- V - VOA VIAL
- S - STERILE
- O - OTHER

PRESERVATION:
1. HCl, ≤6°C
2. H_2SO_4, ≤6°C
3. HNO_3
4. NaOH, ≤6°C
5. NaOH/ZnAc, ≤6°C
6. $Na_2S_2O_3$, ≤6°C
7. ≤6°C not frozen

*MATRIX CODES:
- DW - DRINKING WATER
- WW - WASTEWATER
- GW - GROUNDWATER
- SW - SURFACE WATER
- ST - STORM WATER
- W - WATER
- S - SOIL
- SL - SLUDGE
- SD - SOLID
- A - AIR
- L - LIQUID
- P - PRODUCT

SAMPLED BY AND TITLE: William Ballow, Geologist, Golder
DATE/TIME: 11/16/16 /1726
RELINQUISHED BY: William Ballow
DATE/TIME: 11-17-16 /0800

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Charles Hinks
DATE/TIME: 11/17/16 1350

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

pH checked: (Yes) No NA
Ice: (Yes) No NA
Temperature: 2 (Min: 2°C Max:
Custody Seal: (Intact) Broken Not Present
# of Coolers: 1
Cooler ID:

FOR LAB USE ONLY
LAB #: AZK0600
Entered into LIMS:
Tracking #:

COC Revised 2016-05-17.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30203114

Client Name: Pace Georgia Project #

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 6812 5100 4790

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

Thermometer Used NA Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp NA °C Correction Factor: NA °C Final Temp: NA °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 11-19-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH / Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present:			✓	15.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH / Date: 11-19-16

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

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)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JAL
Date:	12/12/2016
Worklist:	32864
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1192648
MB concentration:	0.089
M/B Counting Uncertainty:	0.377
MB MDC:	0.792
MB Numerical Performance Indicator:	0.46
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32864	LCSD32864
Count Date:	12/16/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.807	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.801	
Target Conc. (pCi/L, g, F):	6.441	
Uncertainty (Calculated):	0.464	
Result (pCi/L, g, F):	8.521	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.711	
Numerical Performance Indicator:	4.80	
Percent Recovery:	132.29%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30202831001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30202831001DUP	
Sample Result (pCi/L, g, F):	0.133	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.364	
Sample Duplicate Result (pCi/L, g, F):	0.543	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.380	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.527	30202831001
Duplicate RPD:	121.16%	30202831001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	

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.

LMK
12/20/16

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	12/6/2016
Worklist:	32687
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1188126
MB concentration:	0.104
M/B Counting Uncertainty:	0.157
MB MDC:	0.342
MB Numerical Performance Indicator:	1.31
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32687	LCSD32687
Count Date:	12/7/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.673	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	8.916	
Uncertainty (Calculated):	0.419	
Result (pCi/L, g, F):	8.412	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.879	
Numerical Performance Indicator:	-1.01	
Percent Recovery:	94.35%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30203117004	
Duplicate Sample I.D.	30203117004DUP	
Sample Result (pCi/L, g, F):	0.107	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.171	
Sample Duplicate Result (pCi/L, g, F):	0.356	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.245	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.635	30203117004
Duplicate RPD:	107.69%	30203117004DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

LMPC

***Batch must be re-prepped due to unacceptable precision.

12/20/16

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZK0639
December 05, 2016
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWC-33S	AZK0639-01	Ground Water	11/17/16 09:36	11/18/16 13:25
RB-1	AZK0639-02	Water	11/17/16 11:37	11/18/16 13:25
FB-1	AZK0639-03	Water	11/17/16 12:00	11/18/16 13:25
BRGWC-34S	AZK0639-04	Ground Water	11/17/16 11:23	11/18/16 13:25
BRGWC-35S	AZK0639-05	Ground Water	11/17/16 13:14	11/18/16 13:25
BRGWA-23S	AZK0639-06	Ground Water	11/17/16 14:40	11/18/16 13:25
BRGWC-17S	AZK0639-07	Ground Water	11/17/16 14:57	11/18/16 13:25
BRGWC-25I	AZK0639-08	Ground Water	11/17/16 15:41	11/18/16 13:25
Dup-1	AZK0639-09	Ground Water	11/17/16 00:00	11/18/16 13:25
BRGWC-27I	AZK0639-10	Ground Water	11/18/16 08:42	11/18/16 13:25
BRGWC-36S	AZK0639-11	Ground Water	11/18/16 08:54	11/18/16 13:25
Dup-2	AZK0639-12	Ground Water	11/18/16 00:00	11/18/16 13:25

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-33S
Date/Time Sampled: 11/17/2016 9:36:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-01
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	382	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	5.3	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 04:37	6110563	RNB
Fluoride	0.26	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 04:37	6110563	RNB
Sulfate	250	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 12:41	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Barium	0.0211	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Beryllium	0.0020	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 19:46	6110508	CSW
Boron	1.08	0.0400	0.0064	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Cadmium	0.0005	0.0010	0.00007	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Calcium	41.3	0.500	0.0311	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:46	6110508	CSW
Cobalt	0.0551	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:46	6110508	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Selenium	0.0028	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Lithium	0.0097	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:11	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:22	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: RB-1
Date/Time Sampled: 11/17/2016 11:37:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZK0639-02
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	10	25	10	mg/L	SM 2540 C	J	1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	11/21/16 17:03	11/22/16 04:59	6110563	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 04:59	6110563	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 04:59	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Barium	0.0012	0.0100	0.0004	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:52	6110508	CSW
Boron	0.0077	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:52	6110508	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:52	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:17	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:24	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: FB-1
Date/Time Sampled: 11/17/2016 12:00:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZK0639-03
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	11/21/16 17:03	11/22/16 05:20	6110563	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 05:20	6110563	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 05:20	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Barium	0.0010	0.0100	0.0004	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:58	6110508	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:58	6110508	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 19:58	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:23	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:27	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-34S
Date/Time Sampled: 11/17/2016 11:23:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-04
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	651	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	7.6	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 05:41	6110563	RNB
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 05:41	6110563	RNB
Sulfate	460	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 13:02	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Barium	0.0400	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:04	6110508	CSW
Boron	2.17	2.00	0.321	mg/L	EPA 6020B		50	11/21/16 10:15	12/01/16 14:24	6110508	CSW
Cadmium	0.0009	0.0010	0.00007	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Calcium	97.6	25.0	1.55	mg/L	EPA 6020B		50	11/21/16 10:15	12/01/16 14:24	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:04	6110508	CSW
Cobalt	0.0028	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:04	6110508	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:29	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:29	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-35S
Date/Time Sampled: 11/17/2016 1:14:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-05
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	453	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 06:45	6110563	RNB
Fluoride	0.24	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 06:45	6110563	RNB
Sulfate	280	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 13:23	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Barium	0.0808	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:09	6110508	CSW
Boron	0.967	0.0400	0.0064	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Calcium	62.6	25.0	1.55	mg/L	EPA 6020B		50	11/21/16 10:15	12/01/16 15:26	6110508	CSW
Chromium	0.0024	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:09	6110508	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:09	6110508	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Lithium	0.0022	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:34	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:36	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWA-23S
Date/Time Sampled: 11/17/2016 2:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-06
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	211	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 07:06	6110563	RNB
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 07:06	6110563	RNB
Sulfate	84	5.0	0.26	mg/L	EPA 300.0		5	11/21/16 17:03	11/28/16 13:43	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Barium	0.109	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:27	6110508	CSW
Boron	0.0617	0.0400	0.0064	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Calcium	19.2	2.50	0.155	mg/L	EPA 6020B		5	11/21/16 10:15	12/01/16 14:47	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:27	6110508	CSW
Cobalt	0.0072	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:27	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Selenium	0.0052	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Lithium	0.0063	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:52	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:39	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-17S
Date/Time Sampled: 11/17/2016 2:57:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-07
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	308	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	4.0	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 07:27	6110563	RNB
Fluoride	0.33	0.30	0.02	mg/L	EPA 300.0	B-01	1	11/21/16 17:03	11/22/16 07:27	6110563	RNB
Sulfate	120	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 14:04	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Barium	0.0405	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:32	6110508	CSW
Boron	0.0067	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Calcium	31.8	5.00	0.311	mg/L	EPA 6020B		10	11/21/16 10:15	12/01/16 12:07	6110508	CSW
Chromium	0.0185	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:32	6110508	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:32	6110508	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Selenium	0.0028	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/23/16 23:57	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:41	6110560	MTC

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Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-25I
Date/Time Sampled: 11/17/2016 3:41:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-08
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	611	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	7.7	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 07:48	6110563	RNB
Fluoride	0.27	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 07:48	6110563	RNB
Sulfate	200	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 14:25	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Barium	0.0448	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:38	6110508	CSW
Boron	1.70	0.400	0.0642	mg/L	EPA 6020B		10	11/21/16 10:15	12/01/16 12:14	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Calcium	78.4	25.0	1.55	mg/L	EPA 6020B		50	11/21/16 10:15	12/01/16 14:59	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:38	6110508	CSW
Cobalt	0.0086	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:38	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:03	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:43	6110560	MTC

PACE ANALYTICAL SERVICES, LLC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: Dup-1
Date/Time Sampled: 11/17/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-09
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	659	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	7.6	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 09:34	6110563	RNB
Fluoride	0.23	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 09:34	6110563	RNB
Sulfate	410	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 14:45	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Barium	0.0413	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:44	6110508	CSW
Boron	1.68	0.400	0.0642	mg/L	EPA 6020B		10	11/21/16 10:15	12/01/16 12:22	6110508	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Calcium	71.3	25.0	1.55	mg/L	EPA 6020B		50	11/21/16 10:15	12/01/16 15:06	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:44	6110508	CSW
Cobalt	0.0083	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:44	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:09	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:46	6110560	MTC

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(770) 734-4200 FAX (770) 734-4201

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-27I
Date/Time Sampled: 11/18/2016 8:42:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-10
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	503	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	6.3	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 09:56	6110563	RNB
Fluoride	0.19	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 09:56	6110563	RNB
Sulfate	320	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 15:06	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:14	6110508	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:49	6110508	CSW
Barium	0.0173	0.0100	0.0004	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:14	6110508	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:49	6110508	CSW
Boron	1.91	0.400	0.0642	mg/L	EPA 6020B		10	11/21/16 10:15	12/01/16 12:29	6110508	CSW
Cadmium	0.000090	0.0010	0.00007	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:49	6110508	CSW
Calcium	82.4	25.0	1.55	mg/L	EPA 6020B		50	11/21/16 10:15	12/01/16 15:12	6110508	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:49	6110508	CSW
Cobalt	0.0131	0.0100	0.0005	mg/L	EPA 6020B		1	11/21/16 10:15	11/29/16 20:49	6110508	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:14	6110508	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:14	6110508	CSW
Selenium	0.0047	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/21/16 10:15	11/29/16 20:49	6110508	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:14	6110508	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/21/16 10:15	11/24/16 00:14	6110508	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/22/16 10:15	11/22/16 15:48	6110560	MTC

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: BRGWC-36S
Date/Time Sampled: 11/18/2016 8:54:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-11
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	524	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	3.4	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 10:17	6110563	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	B-01, J	1	11/21/16 17:03	11/22/16 10:17	6110563	RNB
Sulfate	170	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 15:27	6110563	RNB
Metals, Total											
Antimony	0.0016	0.0030	0.0008	mg/L	EPA 6020B	B-01, J	1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Barium	0.0546	0.0100	0.0004	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Boron	0.831	0.0400	0.0064	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Calcium	53.9	5.00	0.311	mg/L	EPA 6020B		10	11/23/16 08:35	11/28/16 19:44	6110599	CSW
Chromium	0.0080	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Selenium	0.0082	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Lithium	0.0026	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/23/16 08:35	11/23/16 11:58	6110599	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 15:54	6110616	MTC

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639
Client ID: Dup-2
Date/Time Sampled: 11/18/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0639-12
Date/Time Received: 11/18/2016 1:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	488	25	10	mg/L	SM 2540 C		1	11/21/16 15:12	11/21/16 15:12	6110527	JPT
Inorganic Anions											
Chloride	6.4	0.25	0.01	mg/L	EPA 300.0		1	11/21/16 17:03	11/22/16 10:59	6110563	RNB
Fluoride	0.36	0.30	0.02	mg/L	EPA 300.0	B-01	1	11/21/16 17:03	11/22/16 10:59	6110563	RNB
Sulfate	300	10	0.51	mg/L	EPA 300.0		10	11/21/16 17:03	11/28/16 15:47	6110563	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Barium	0.0170	0.0100	0.0004	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	11/23/16 08:35	11/29/16 15:09	6110599	CSW
Boron	1.84	0.400	0.0642	mg/L	EPA 6020B		10	11/23/16 08:35	11/28/16 19:21	6110599	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Calcium	80.0	5.00	0.311	mg/L	EPA 6020B		10	11/23/16 08:35	11/28/16 19:21	6110599	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Cobalt	0.0133	0.0100	0.0005	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Selenium	0.0033	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/23/16 08:35	11/23/16 12:04	6110599	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	11/23/16 08:35	11/29/16 15:09	6110599	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 15:56	6110616	MTC

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December 05, 2016

Report No.: AZK0639

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110527 - SM 2540 C											
Blank (6110527-BLK1)						Prepared & Analyzed: 11/21/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6110527-BS1)						Prepared & Analyzed: 11/21/16					
Total Dissolved Solids	401	25	10	mg/L	400.00		100	84-108			
Duplicate (6110527-DUP1)		**Source: AZK0639-03**				Prepared & Analyzed: 11/21/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (6110527-DUP2)		**Source: AZK0639-07**				Prepared & Analyzed: 11/21/16					
Total Dissolved Solids	319	25	10	mg/L		308			4	10	

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December 05, 2016

Report No.: AZK0639

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110563 - EPA 300.0											
Blank (6110563-BLK1)						Prepared: 11/21/16 Analyzed: 11/22/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	0.03	0.30	0.02	mg/L							J
Sulfate	ND	1.0	0.05	mg/L							
LCS (6110563-BS1)						Prepared: 11/21/16 Analyzed: 11/22/16					
Chloride	10.7	0.25	0.01	mg/L	10.010		107	90-110			
Fluoride	11.0	0.30	0.02	mg/L	10.020		109	90-110			
Sulfate	10.7	1.0	0.05	mg/L	10.020		107	90-110			
Matrix Spike (6110563-MS1)			**Source: AZK0639-04**			Prepared: 11/21/16 Analyzed: 11/22/16					
Chloride	17.1	0.25	0.01	mg/L	10.010	7.61	95	90-110			
Fluoride	10.2	0.30	0.02	mg/L	10.020	0.12	100	90-110			
Sulfate	277	1.0	0.05	mg/L	10.020	290	NR	90-110			QM-02
Matrix Spike (6110563-MS2)			**Source: AZK0639-11**			Prepared: 11/21/16 Analyzed: 11/22/16					
Chloride	12.4	0.25	0.01	mg/L	10.010	3.36	90	90-110			
Fluoride	9.77	0.30	0.02	mg/L	10.020	0.04	97	90-110			
Sulfate	230	1.0	0.05	mg/L	10.020	241	NR	90-110			QM-02
Matrix Spike Dup (6110563-MSD1)			**Source: AZK0639-04**			Prepared: 11/21/16 Analyzed: 11/22/16					
Chloride	17.8	0.25	0.01	mg/L	10.010	7.61	102	90-110	4	15	
Fluoride	10.9	0.30	0.02	mg/L	10.020	0.12	108	90-110	7	15	
Sulfate	276	1.0	0.05	mg/L	10.020	290	NR	90-110	0.4	15	QM-02

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Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110508 - EPA 3005A											
Blank (6110508-BLK1)						Prepared: 11/21/16 Analyzed: 11/23/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6110508-BS1)						Prepared: 11/21/16 Analyzed: 11/23/16					
Antimony	0.114	0.0030	0.0008	mg/L	0.10000		114	80-120			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000		105	80-120			
Barium	0.103	0.0100	0.0004	mg/L	0.10000		103	80-120			
Beryllium	0.0973	0.0030	0.00008	mg/L	0.10000		97	80-120			
Boron	0.978	0.0400	0.0064	mg/L	1.0000		98	80-120			
Cadmium	0.106	0.0010	0.00007	mg/L	0.10000		106	80-120			
Calcium	1.10	0.500	0.0311	mg/L	1.0000		110	80-120			
Chromium	0.107	0.0100	0.0009	mg/L	0.10000		107	80-120			
Cobalt	0.108	0.0100	0.0005	mg/L	0.10000		108	80-120			
Copper	0.103	0.0250	0.0005	mg/L	0.10000		103	80-120			
Lead	0.106	0.0050	0.0001	mg/L	0.10000		106	80-120			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000		109	80-120			
Nickel	0.105	0.0100	0.0006	mg/L	0.10000		105	80-120			
Selenium	0.116	0.0100	0.0010	mg/L	0.10000		116	80-120			
Silver	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000		104	80-120			
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000		105	80-120			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000		108	80-120			
Lithium	0.0972	0.0500	0.0021	mg/L	0.10000		97	80-120			

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December 05, 2016

Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110508 - EPA 3005A											
Matrix Spike (6110508-MS1)		**Source: AZK0570-01**			Prepared: 11/21/16 Analyzed: 11/23/16						
Antimony	0.114	0.0030	0.0008	mg/L	0.10000	ND	114	75-125			
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	ND	109	75-125			
Barium	0.141	0.0100	0.0004	mg/L	0.10000	0.0365	104	75-125			
Beryllium	0.0932	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	2.83	2.00	0.321	mg/L	1.0000	2.03	80	75-125			
Cadmium	0.0998	0.0010	0.00007	mg/L	0.10000	ND	100	75-125			
Calcium	107	25.0	1.55	mg/L	1.0000	107	NR	75-125			QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125			
Cobalt	0.116	0.0100	0.0005	mg/L	0.10000	0.0145	101	75-125			
Copper	0.0931	0.0250	0.0005	mg/L	0.10000	ND	93	75-125			
Lead	0.0987	0.0050	0.0001	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125			
Nickel	0.108	0.0100	0.0006	mg/L	0.10000	0.0109	97	75-125			
Selenium	0.116	0.0100	0.0010	mg/L	0.10000	ND	116	75-125			
Silver	0.0975	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0997	0.0010	0.0002	mg/L	0.10000	ND	100	75-125			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	0.0024	99	75-125			
Lithium	0.0949	0.0500	0.0021	mg/L	0.10000	0.0075	87	75-125			
Matrix Spike Dup (6110508-MSD1)		**Source: AZK0570-01**			Prepared: 11/21/16 Analyzed: 11/23/16						
Antimony	0.115	0.0030	0.0008	mg/L	0.10000	ND	115	75-125	1	20	
Arsenic	0.110	0.0050	0.0016	mg/L	0.10000	ND	110	75-125	0.6	20	
Barium	0.140	0.0100	0.0004	mg/L	0.10000	0.0365	103	75-125	0.7	20	
Beryllium	0.0916	0.0030	0.00008	mg/L	0.10000	ND	92	75-125	2	20	
Boron	2.80	2.00	0.321	mg/L	1.0000	2.03	77	75-125	0.9	20	
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125	2	20	
Calcium	106	25.0	1.55	mg/L	1.0000	107	NR	75-125	1	20	QM-02
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	3	20	
Cobalt	0.112	0.0100	0.0005	mg/L	0.10000	0.0145	97	75-125	3	20	
Copper	0.0953	0.0250	0.0005	mg/L	0.10000	ND	95	75-125	2	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	ND	101	75-125	2	20	
Molybdenum	0.114	0.0100	0.0017	mg/L	0.10000	ND	114	75-125	3	20	
Nickel	0.107	0.0100	0.0006	mg/L	0.10000	0.0109	97	75-125	0.7	20	
Selenium	0.120	0.0100	0.0010	mg/L	0.10000	ND	120	75-125	3	20	
Silver	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.101	0.0010	0.0002	mg/L	0.10000	ND	101	75-125	1	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	0.08	20	
Zinc	0.102	0.0100	0.0021	mg/L	0.10000	0.0024	99	75-125	0.5	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	0.0075	94	75-125	7	20	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110508 - EPA 3005A											
Post Spike (6110508-PS1)			**Source: AZK0570-01**			Prepared: 11/21/16 Analyzed: 11/23/16					
Antimony	112			ug/L	100.00	0.240	111	80-120			
Arsenic	106			ug/L	100.00	0.856	105	80-120			
Barium	135			ug/L	100.00	36.5	99	80-120			
Beryllium	94.1			ug/L	100.00	0.0351	94	80-120			
Boron	2720			ug/L	1000.0	2030	69	80-120			QM-02
Cadmium	97.9			ug/L	100.00	0.0406	98	80-120			
Calcium	104000			ug/L	1000.0	107000	NR	80-120			QM-02
Chromium	102			ug/L	100.00	0.298	102	80-120			
Cobalt	113			ug/L	100.00	14.5	99	80-120			
Copper	93.4			ug/L	100.00	0.0318	93	80-120			
Lead	95.7			ug/L	100.00	0.0679	96	80-120			
Molybdenum	108			ug/L	100.00	0.953	107	80-120			
Nickel	110			ug/L	100.00	10.9	99	80-120			
Selenium	117			ug/L	100.00	0.746	116	80-120			
Silver	97.5			ug/L	100.00	0.0337	97	80-120			
Thallium	97.9			ug/L	100.00	0.125	98	80-120			
Vanadium	107			ug/L	100.00	-0.396	107	80-120			
Zinc	104			ug/L	100.00	2.37	101	80-120			
Lithium	104			ug/L	100.00	7.51	97	80-120			
Batch 6110560 - EPA 7470A											
Blank (6110560-BLK1)						Prepared & Analyzed: 11/22/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6110560-BS1)						Prepared & Analyzed: 11/22/16					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			

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Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110560 - EPA 7470A											
Matrix Spike (6110560-MS1)			**Source: AZK0639-05**			Prepared & Analyzed: 11/22/16					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (6110560-MSD1)			**Source: AZK0639-05**			Prepared & Analyzed: 11/22/16					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125	0.9	20	
Post Spike (6110560-PS1)			**Source: AZK0639-05**			Prepared & Analyzed: 11/22/16					
Mercury	1.69			ug/L	1.6667	-0.00940	102	80-120			
Batch 6110599 - EPA 3005A											
Blank (6110599-BLK1)						Prepared & Analyzed: 11/23/16					
Antimony	0.0011	0.0030	0.0008	mg/L							J
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							

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December 05, 2016

Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110599 - EPA 3005A											
LCS (6110599-BS1)						Prepared & Analyzed: 11/23/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000		110	80-120			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000		102	80-120			
Barium	0.103	0.0100	0.0004	mg/L	0.10000		103	80-120			
Beryllium	0.108	0.0030	0.00008	mg/L	0.10000		108	80-120			
Boron	1.16	0.0400	0.0064	mg/L	1.0000		116	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	1.07	0.500	0.0311	mg/L	1.0000		107	80-120			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000		105	80-120			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Copper	0.101	0.0250	0.0005	mg/L	0.10000		101	80-120			
Lead	0.105	0.0050	0.0001	mg/L	0.10000		105	80-120			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000		106	80-120			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.0999	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000		104	80-120			
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000		108	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.112	0.0500	0.0021	mg/L	0.10000		112	80-120			
Matrix Spike (6110599-MS1)		**Source: AZK0639-11**				Prepared & Analyzed: 11/23/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	0.0016	109	75-125			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000	ND	104	75-125			
Barium	0.151	0.0500	0.0022	mg/L	0.10000	0.0546	97	75-125			
Beryllium	0.0934	0.0030	0.00008	mg/L	0.10000	0.0001	93	75-125			
Boron	1.75	0.200	0.0321	mg/L	1.0000	0.831	92	75-125			QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	53.6	5.00	0.311	mg/L	1.0000	53.9	NR	75-125			QM-02
Chromium	0.113	0.0100	0.0009	mg/L	0.10000	0.0080	105	75-125			
Cobalt	0.0994	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Copper	0.0980	0.0250	0.0005	mg/L	0.10000	ND	98	75-125			
Lead	0.105	0.0050	0.0001	mg/L	0.10000	ND	105	75-125			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000	ND	109	75-125			
Nickel	0.115	0.0100	0.0006	mg/L	0.10000	0.0138	101	75-125			
Selenium	0.109	0.0100	0.0010	mg/L	0.10000	0.0082	101	75-125			
Silver	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125			
Vanadium	0.109	0.0100	0.0071	mg/L	0.10000	ND	109	75-125			
Zinc	0.111	0.0100	0.0021	mg/L	0.10000	0.0091	101	75-125			
Lithium	0.0976	0.0500	0.0021	mg/L	0.10000	0.0026	95	75-125			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110599 - EPA 3005A											
Matrix Spike Dup (6110599-MSD1)		**Source: AZK0639-11**			Prepared & Analyzed: 11/23/16						
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	0.0016	108	75-125	0.9	20	
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000	ND	104	75-125	0.07	20	
Barium	0.151	0.0500	0.0022	mg/L	0.10000	0.0546	96	75-125	0.4	20	
Beryllium	0.0910	0.0030	0.00008	mg/L	0.10000	0.0001	91	75-125	3	20	
Boron	1.78	0.200	0.0321	mg/L	1.0000	0.831	95	75-125	2	20	QM-02
Cadmium	0.0985	0.0010	0.00007	mg/L	0.10000	ND	99	75-125	3	20	
Calcium	53.3	5.00	0.311	mg/L	1.0000	53.9	NR	75-125	0.6	20	QM-02
Chromium	0.111	0.0100	0.0009	mg/L	0.10000	0.0080	103	75-125	2	20	
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	1	20	
Copper	0.0967	0.0250	0.0005	mg/L	0.10000	ND	97	75-125	1	20	
Lead	0.102	0.0050	0.0001	mg/L	0.10000	ND	102	75-125	3	20	
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000	ND	109	75-125	0.7	20	
Nickel	0.112	0.0100	0.0006	mg/L	0.10000	0.0138	98	75-125	2	20	
Selenium	0.108	0.0100	0.0010	mg/L	0.10000	0.0082	99	75-125	2	20	
Silver	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	2	20	
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125	0.2	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	1	20	
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0091	98	75-125	3	20	
Lithium	0.0964	0.0500	0.0021	mg/L	0.10000	0.0026	94	75-125	1	20	
Post Spike (6110599-PS1)		**Source: AZK0639-11**			Prepared & Analyzed: 11/23/16						
Antimony	99.9			ug/L	100.00	1.59	98	80-120			
Arsenic	101			ug/L	100.00	0.140	101	80-120			
Barium	151			ug/L	100.00	54.6	97	80-120			
Beryllium	92.5			ug/L	100.00	0.104	92	80-120			
Boron	1780			ug/L	1000.0	831	95	80-120			QM-02
Cadmium	98.8			ug/L	100.00	0.0705	99	80-120			
Calcium	53000			ug/L	1000.0	53900	NR	80-120			QM-02
Chromium	110			ug/L	100.00	7.96	102	80-120			
Cobalt	98.4			ug/L	100.00	0.123	98	80-120			
Copper	95.7			ug/L	100.00	0.261	95	80-120			
Lead	101			ug/L	100.00	0.0342	101	80-120			
Molybdenum	107			ug/L	100.00	0.222	106	80-120			
Nickel	112			ug/L	100.00	13.8	98	80-120			
Selenium	109			ug/L	100.00	8.22	101	80-120			
Silver	99.6			ug/L	100.00	0.0177	100	80-120			
Thallium	102			ug/L	100.00	0.0957	102	80-120			
Vanadium	108			ug/L	100.00	1.40	107	80-120			
Zinc	109			ug/L	100.00	9.13	100	80-120			
Lithium	96.4			ug/L	100.00	2.63	94	80-120			

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 05, 2016

Report No.: AZK0639

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110616 - EPA 7470A											
Blank (6110616-BLK1)						Prepared & Analyzed: 11/28/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6110616-BS1)						Prepared & Analyzed: 11/28/16					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			
Matrix Spike (6110616-MS1)		**Source: AZK0639-12**				Prepared & Analyzed: 11/28/16					
Mercury	0.00247	0.00050	0.000041	mg/L	2.5000E-3	ND	99	75-125			
Matrix Spike Dup (6110616-MSD1)		**Source: AZK0639-12**				Prepared & Analyzed: 11/28/16					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	1	20	
Post Spike (6110616-PS1)		**Source: AZK0639-12**				Prepared & Analyzed: 11/28/16					
Mercury	1.76			ug/L	1.6667	0.0114	105	80-120			

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December 05, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com
Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B1085 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham | CC: Maria Padilla Heath McCorkle

REQUESTED COMPLETION DATE: | PO #: jaburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III + IV (EPA 6020/7470)	Cl, F, SO4, TDS (EPA 300.0 & SM 2540C)	Radium 226 + 228 (SW 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:							P	P	P								
PRESERVATION:							3	7	3								
11/17/16	0936	GW		✓	BRGWL-33S	3	1	1	1							1	
11/17/16	1137	GW		✓	RB-1	3	1	1	1							2	
11/17/16	1200	W		✓	FB-1	3	1	1	1							3	
11/17/16	1123	GW		✓	BRGWL-34S	3	1	1	1							4	
11/17/16	1314	GW		✓	BRGWL-35S	3	1	1	1							5	
11/17/16	1440	GW		✓	BRGWA-23S	3	1	1	1							6	
11/17/16	1457	GW		✓	BRGWL-17S	3	1	1	1							7	
11/17/16	1541	GW		✓	BRGWL-25I	4	1	1	2							8	Extra radium
11/17/16	—	GW		✓	DUP-1	3	1	1	1							9	
11/18/16	0842	GW		✓	BRGWL-27I	3	1	1	1							10	
11/18/16	0854	GW		✓	BRGWL-36S	3	1	1	1							11	
11/18/16	—	GW		✓	DUP-2	3	1	1	1							12	

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: Travis Martinez, Golder | DATE/TIME: 11/18/16 0904

RELINQUISHED BY: | DATE/TIME: 11-18-16 0945

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: | DATE/TIME: 11/18/16 1325

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Packed: No NA | Ice: Yes No NA | Temperature: 2 (Min: 2° Max:

Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #: AZK 0639
Entered into LIMS:

Tracking #:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 12/5/2016 2:33:26PM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 11/18/16 13:25

Work Order: AZK0639
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 12 **#Containers:** 37

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 22, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 30203217

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2016. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 30203217

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 30203217

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30203217001	**BRGWC-33S**	Water	11/17/16 09:36	11/21/16 09:00
30203217002	**RB-1**	Water	11/17/16 11:37	11/21/16 09:00
30203217003	**FB-1**	Water	11/17/16 12:00	11/21/16 09:00
30203217004	**BRGWC-34S**	Water	11/17/16 11:23	11/21/16 09:00
30203217005	**BRGWC-35S**	Water	11/17/16 13:14	11/21/16 09:00
30203217006	**BRGWA-23S**	Water	11/17/16 14:40	11/21/16 09:00
30203217007	**BRGWC-17S**	Water	11/17/16 14:57	11/21/16 09:00
30203217008	**BRGWC-25I**	Water	11/17/16 15:41	11/21/16 09:00
30203217009	**Dup-1**	Water	11/17/16 00:00	11/21/16 09:00
30203217010	**BRGWC-27I**	Water	11/18/16 08:42	11/21/16 09:00
30203217011	**BRGWC-36S**	Water	11/18/16 08:54	11/21/16 09:00
30203217012	**Dup-2**	Water	11/18/16 00:00	11/21/16 09:00

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 30203217

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30203217001	**BRGWC-33S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217002	**RB-1**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217003	**FB-1**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217004	**BRGWC-34S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217005	**BRGWC-35S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217006	**BRGWA-23S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217007	**BRGWC-17S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217008	**BRGWC-25I**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217009	**Dup-1**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217010	**BRGWC-27I**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217011	**BRGWC-36S**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30203217012	**Dup-2**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203217

Sample: BRGWC-33S **Lab ID: 30203217001** Collected: 11/17/16 09:36 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.243 ± 0.192 (0.319) C:94% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.780 ± 0.455 (0.808) C:65% T:91%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.647 (1.13)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: RB-1 **Lab ID: 30203217002** Collected: 11/17/16 11:37 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0481 ± 0.0842 (0.328) C:79% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.170 ± 0.464 (0.964) C:61% T:86%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.170 ± 0.548 (1.29)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: FB-1 **Lab ID: 30203217003** Collected: 11/17/16 12:00 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.364 ± 0.389 (0.734) C:91% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**-0.891 ± 0.617 (1.42) C:61% T:88%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.364 ± 1.01 (2.15)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: BRGWC-34S **Lab ID: 30203217004** Collected: 11/17/16 11:23 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.544 ± 0.264 (0.324) C:94% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.0691 ± 0.360 (0.762) C:68% T:88%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.613 ± 0.624 (1.09)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: BRGWC-35S **Lab ID: 30203217005** Collected: 11/17/16 13:14 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.148 ± 0.158 (0.302) C:94% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.581 ± 0.441 (0.825) C:67% T:81%**	pCi/L	12/21/16 19:40	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203217

Sample: BRGWC-35S **Lab ID: 30203217005** Collected: 11/17/16 13:14 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.729 ± 0.599 (1.13)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: BRGWA-23S **Lab ID: 30203217006** Collected: 11/17/16 14:40 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.246 ± 0.221 (0.412) C:85% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.558 ± 0.511 (0.989) C:63% T:84%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.804 ± 0.732 (1.40)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: BRGWC-17S **Lab ID: 30203217007** Collected: 11/17/16 14:57 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0264 ± 0.122 (0.322) C:85% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.119 ± 0.504 (1.06) C:60% T:83%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.145 ± 0.626 (1.38)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: BRGWC-25I **Lab ID: 30203217008** Collected: 11/17/16 15:41 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.281 ± 0.192 (0.281) C:95% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.918 ± 0.525 (0.927) C:59% T:86%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**1.20 ± 0.717 (1.21)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: Dup-1 **Lab ID: 30203217009** Collected: 11/17/16 00:00 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.167 ± 0.162 (0.293) C:94% T:NA**	pCi/L	12/07/16 12:32	13982-63-3	
Radium-228	EPA 9320	**0.622 ± 0.464 (0.866) C:61% T:85%**	pCi/L	12/21/16 19:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.789 ± 0.626 (1.16)**	pCi/L	12/22/16 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203217

Sample: BRGWC-27I **Lab ID: 30203217010** Collected: 11/18/16 08:42 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.355 ± 0.221 (0.325) C:90% T:NA**	pCi/L	12/07/16 12:40	13982-63-3	
Radium-228	EPA 9320	**0.216 ± 0.511 (1.05) C:61% T:83%**	pCi/L	12/21/16 19:41	15262-20-1	
Total Radium	Total Radium Calculation	**0.571 ± 0.732 (1.38)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: BRGWC-36S **Lab ID: 30203217011** Collected: 11/18/16 08:54 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.337 ± 0.215 (0.328) C:96% T:NA**	pCi/L	12/07/16 12:40	13982-63-3	
Radium-228	EPA 9320	**0.881 ± 0.566 (1.03) C:56% T:81%**	pCi/L	12/21/16 19:41	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 0.781 (1.36)**	pCi/L	12/22/16 16:27	7440-14-4	

Sample: Dup-2 **Lab ID: 30203217012** Collected: 11/18/16 00:00 Received: 11/21/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.312 ± 0.202 (0.299) C:99% T:NA**	pCi/L	12/07/16 14:19	13982-63-3	
Radium-228	EPA 9320	**-0.129 ± 0.368 (0.813) C:62% T:88%**	pCi/L	12/21/16 19:41	15262-20-1	
Total Radium	Total Radium Calculation	**0.312 ± 0.570 (1.11)**	pCi/L	12/22/16 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203217

QC Batch: 241712 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30203217001, 30203217002, 30203217003, 30203217004

METHOD BLANK: 1188126 Matrix: Water
Associated Lab Samples: 30203217001, 30203217002, 30203217003, 30203217004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.104 ± 0.157 (0.342) C:95% T:NA	pCi/L	12/07/16 09:29	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203217

QC Batch: 242658 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30203217001, 30203217002, 30203217003, 30203217004, 30203217005, 30203217006, 30203217007, 30203217008, 30203217009, 30203217010, 30203217011, 30203217012

METHOD BLANK: 1192650 Matrix: Water
Associated Lab Samples: 30203217001, 30203217002, 30203217003, 30203217004, 30203217005, 30203217006, 30203217007, 30203217008, 30203217009, 30203217010, 30203217011, 30203217012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.455 ± 0.420 (0.810) C:64% T:90%	pCi/L	12/21/16 19:39	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203217

QC Batch: 241715 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30203217005, 30203217006, 30203217007, 30203217008, 30203217009, 30203217010, 30203217011, 30203217012

METHOD BLANK: 1188134 Matrix: Water
Associated Lab Samples: 30203217005, 30203217006, 30203217007, 30203217008, 30203217009, 30203217010, 30203217011, 30203217012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0598 ± 0.0776 (0.316) C:90% T:NA	pCi/L	12/07/16 12:32	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant Branch
Pace Project No.: 30203217

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.

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.

WO#:30203217

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZK0639 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 12/21/2016

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	BRGWC-33S	G	11/17/2016 9:36	AZK0639-01	GW	1	X	001
2	RB-1	G	11/17/2016 11:37	AZK0639-02	W	1	X	002
3	FB-1	G	11/17/2016 12:00	AZK0639-03	W	1	X	003
4	BRGWC-34S	G	11/17/2016 11:23	AZK0639-04	GW	1	X	004
5	BRGWC-35S	G	11/17/2016 13:14	AZK0639-05	GW	1	X	005
6	BRGWA-23S	G	11/17/2016 14:40	AZK0639-06	GW	1	X	006
7	BRGWC-17S	G	11/17/2016 14:57	AZK0639-07	GW	1	X	007
8	BRGWC-25I	G	11/17/2016 15:41	AZK0639-08	GW	2	X	008
9	Dup-1	G	11/17/2016 0:00	AZK0639-09	GW	1	X	009
10	BRGWC-27I	G	11/18/2016 8:42	AZK0639-10	GW	1	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Kourin Hill	11-21-16 0900	
2					
3					

Cooler Temperature on Receipt NA °C | **Custody Seal Y or (N)** | **Received on Ice Y or (N)** | **Sample Intact (Y) or N**

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30203217

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZK0639 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 12/21/2016

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
11	BRGWC-36S	G	11/18/2016 8:54	AZK0639-11	GW	1					X												011
12	Dup-2	G	11/18/2016 0:00	AZK0639-12	GW	1					X												012
13																							
14																							
15																							
16																							
17																							
18																							
19																							
20																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Hill	11-21-16 0900	
2					
3					

Cooler Temperature on Receipt NA °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Sample Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30203217

9634

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B1085
Atlanta, GA 30308
P. 404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: jaburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III + IV (EPA 6020 / 7470)	Cl, F, SO4, TDS (EPA 300.0 & SM 2540C)	Radium 226 + 228 (SW 9315 / 9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:	P	P	P			
					PRESERVATION:	3	3	3			
11/17/16	0936	GW		✓	BRGWL-33S	3	1	1	1	1	
11/17/16	1137	GW		✓	RB-1	3	1	1	1	2	
11/17/16	1200	W		✓	FB-1	3	1	1	1	3	
11/17/16	1123	GW		✓	BRGWL-34S	3	1	1	1	4	
11/17/16	1314	GW		✓	BRGWL-35S	3	1	1	1	5	
11/17/16	1440	GW		✓	BRGWA-23S	3	1	1	1	6	
11/17/16	1457	GW		✓	BRGWL-17S	3	1	1	1	7	
11/17/16	1541	GW		✓	BRGWL-25I	4	1	1	2	8	Extra radium
11/17/16	—	GW		✓	DUP-1	3	1	1	1	9	
11/18/16	0842	GW		✓	BRGWL-27I	3	1	1	1	10	
11/18/16	0854	GW		✓	BRGWL-36S	3	1	1	1	11	
11/18/16	—	GW		✓	DUP-2	3	1	1	1	12	

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: Travis Martinez, Golder
DATE/TIME: 11/18/16 0904

RELINQUISHED BY:
DATE/TIME: 11-18-16 0945

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 11/18/16 1325

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: (Yes) No NA
Ice: (Yes) No NA
Temperature: 2 (Min: 2°C Max:
Custody Seal: (Intact) Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZK 0639
Entered into LIMS:

Tracking #:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Georgia Project # 30203217

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 6012 5100 5226

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

Thermometer Used NA Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 11-21-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH; Date/time of preservation; Lot # of added preservative
Headspace in VOA Vials (>6mm):				14.
Trip Blank Present:				15.
Trip Blank Custody Seals Present				
Rad Aqueous Samples Screened > 0.5 mrem/hr				Initial when completed: KH Date: 11-21-16

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JAL
Date:	12/15/2016
Worklist:	32865
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1192650
MB concentration:	0.455
M/B Counting Uncertainty:	0.412
MB MDC:	0.810
MB Numerical Performance Indicator:	2.17
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32865	LCSD32865
Count Date:	12/21/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.764	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.799	
Target Conc. (pCi/L, g, F):	6.448	
Uncertainty (Calculated):	0.464	
Result (pCi/L, g, F):	6.959	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.802	
Numerical Performance Indicator:	1.08	
Percent Recovery:	107.92%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30203120001	
Duplicate Sample I.D.	30203120001DUP	
Sample Result (pCi/L, g, F):	0.579	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.423	
Sample Duplicate Result (pCi/L, g, F):	0.205	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.366	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.308	30203120001
Duplicate RPD:	95.27%	30203120001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	

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

Comments: * Numerical Indicator is acceptable.

***Batch must be re-prepped due to unacceptable precision.

12/22/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 12/6/2016
Worklist: 32688
Matrix: DW

Method Blank Assessment	
MB Sample ID	1188134
MB concentration:	-0.060
M/B Counting Uncertainty:	0.077
MB MDC:	0.316
MB Numerical Performance Indicator:	-1.52
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32688	LCSD32688
Count Date:	12/7/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.673	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.510	
Target Conc. (pCi/L, g, F):	8.766	
Uncertainty (Calculated):	0.412	
Result (pCi/L, g, F):	7.758	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.592	
Numerical Performance Indicator:	-2.74	
Percent Recovery:	88.49%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30203642004	
Duplicate Sample I.D.	30203642004DUP	
Sample Result (pCi/L, g, F):	0.201	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.114	
Sample Duplicate Result (pCi/L, g, F):	0.151	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.115	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	* 0.606	30203642004
Duplicate RPD:	28.39%	30203642004DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments: * Numerical Indicator is acceptable.

***Batch must be re-prepped due to unacceptable precision.

12/22/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 12/6/2016
Worklist: 32687
Matrix: DW

Method Blank Assessment	
MB Sample ID	1188126
MB concentration:	0.104
M/B Counting Uncertainty:	0.157
MB MDC:	0.342
MB Numerical Performance Indicator:	1.31
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32687	LCSD32687
Count Date:	12/7/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.673	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	8.916	
Uncertainty (Calculated):	0.419	
Result (pCi/L, g, F):	8.412	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.879	
Numerical Performance Indicator:	-1.01	
Percent Recovery:	94.35%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment	
Sample I.D.:	30203117004
Duplicate Sample I.D.	30203117004DUP
Sample Result (pCi/L, g, F):	0.107
Sample Result Counting Uncertainty (pCi/L, g, F):	0.171
Sample Duplicate Result (pCi/L, g, F):	0.356
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.245
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	* -1.635
Duplicate RPD:	107.69%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

30203117004
30203117004DUP

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments: * Numerical Indicator is acceptable.

***Batch must be re-prepped due to unacceptable precision.

12/22/16

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZK0671
December 06, 2016
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWC-38S	AZK0671-01	Ground Water	11/21/16 09:08	11/21/16 17:40
BRGWC-32S	AZK0671-02	Ground Water	11/21/16 09:48	11/21/16 17:40
BRGWC-29I	AZK0671-03	Ground Water	11/21/16 10:57	11/21/16 17:40
BRGWC-30I	AZK0671-04	Ground Water	11/21/16 10:58	11/21/16 17:40
FB-2	AZK0671-05	Water	11/21/16 11:30	11/21/16 17:40
RB-2	AZK0671-06	Water	11/21/16 11:39	11/21/16 17:40

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671
Client ID: BRGWC-38S
Date/Time Sampled: 11/21/2016 9:08:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0671-01
Date/Time Received: 11/21/2016 5:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	795	25	10	mg/L	SM 2540 C		1	11/22/16 11:25	11/22/16 11:25	6110580	JPT
Inorganic Anions											
Chloride	5.1	0.25	0.01	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 13:28	6110583	RNB
Fluoride	0.95	0.30	0.02	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 13:28	6110583	RNB
Sulfate	510	20	1.0	mg/L	EPA 300.0		20	11/22/16 11:03	11/30/16 17:33	6110583	RNB
Metals, Total											
Antimony	0.0009	0.0030	0.0008	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Arsenic	0.0034	0.0050	0.0016	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/03/16 14:01	6110615	CSW
Barium	0.0428	0.0500	0.0004	mg/L	EPA 6020B	B-01, R-01, J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Beryllium	0.0092	0.0030	0.00008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Boron	2.02	0.200	0.0321	mg/L	EPA 6020B		5	11/28/16 08:15	12/03/16 13:34	6110615	CSW
Cadmium	0.0005	0.0010	0.00007	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Calcium	46.4	2.50	0.155	mg/L	EPA 6020B		5	11/28/16 08:15	12/03/16 13:34	6110615	CSW
Chromium	0.0030	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Cobalt	0.298	0.0100	0.0005	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:01	6110615	CSW
Lead	0.0005	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Selenium	0.0409	0.0100	0.0010	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:01	6110615	CSW
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Lithium	0.0223	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:18	6110615	CSW
Mercury	0.00012	0.00050	0.000041	mg/L	EPA 7470A	J	1	11/28/16 10:35	11/28/16 16:11	6110616	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671
Client ID: BRGWC-32S
Date/Time Sampled: 11/21/2016 9:48:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0671-02
Date/Time Received: 11/21/2016 5:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	695	25	10	mg/L	SM 2540 C		1	11/22/16 11:25	11/22/16 11:25	6110580	JPT
Inorganic Anions											
Chloride	7.8	0.25	0.01	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 13:49	6110583	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	11/22/16 11:03	11/22/16 13:49	6110583	RNB
Sulfate	420	10	0.51	mg/L	EPA 300.0		10	11/22/16 11:03	11/28/16 17:51	6110583	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:07	6110615	CSW
Barium	0.0532	0.0500	0.0004	mg/L	EPA 6020B	B-01, R-01	1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Boron	1.19	0.0400	0.0064	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Cadmium	0.00008	0.0010	0.00007	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Calcium	31.1	2.50	0.155	mg/L	EPA 6020B		5	11/28/16 08:15	12/03/16 13:39	6110615	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/03/16 14:07	6110615	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:07	6110615	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:24	6110615	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 16:13	6110616	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671
Client ID: BRGWC-29I
Date/Time Sampled: 11/21/2016 10:57:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0671-03
Date/Time Received: 11/21/2016 5:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	819	25	10	mg/L	SM 2540 C		1	11/22/16 11:25	11/22/16 11:25	6110580	JPT
Inorganic Anions											
Chloride	6.9	0.25	0.01	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 14:53	6110583	RNB
Fluoride	0.37	0.30	0.02	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 14:53	6110583	RNB
Sulfate	500	10	0.51	mg/L	EPA 300.0		10	11/22/16 11:03	11/28/16 18:12	6110583	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Arsenic	0.0019	0.0050	0.0016	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/03/16 14:12	6110615	CSW
Barium	0.0221	0.0500	0.0004	mg/L	EPA 6020B	B-01, R-01, J	1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Beryllium	0.0012	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Boron	1.74	0.400	0.0642	mg/L	EPA 6020B		10	11/28/16 08:15	12/03/16 13:44	6110615	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Calcium	99.1	5.00	0.311	mg/L	EPA 6020B		10	11/28/16 08:15	12/03/16 13:44	6110615	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:12	6110615	CSW
Cobalt	0.0122	0.0100	0.0005	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:12	6110615	CSW
Lead	0.0006	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Selenium	0.0058	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/03/16 14:12	6110615	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Lithium	0.0039	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:30	6110615	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 16:15	6110616	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671
Client ID: BRGWC-30I
Date/Time Sampled: 11/21/2016 10:58:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZK0671-04
Date/Time Received: 11/21/2016 5:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	515	25	10	mg/L	SM 2540 C		1	11/22/16 11:25	11/22/16 11:25	6110580	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.01	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 15:14	6110583	RNB
Fluoride	0.24	0.30	0.02	mg/L	EPA 300.0	J	1	11/22/16 11:03	11/22/16 15:14	6110583	RNB
Sulfate	300	10	0.51	mg/L	EPA 300.0		10	11/22/16 11:03	11/28/16 18:33	6110583	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:18	6110615	CSW
Barium	0.0237	0.0500	0.0004	mg/L	EPA 6020B	B-01, R-01, J	1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Boron	1.68	0.400	0.0642	mg/L	EPA 6020B		10	11/28/16 08:15	12/03/16 13:50	6110615	CSW
Cadmium	0.00008	0.0010	0.00007	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/03/16 14:18	6110615	CSW
Calcium	60.7	5.00	0.311	mg/L	EPA 6020B		10	11/28/16 08:15	12/03/16 13:50	6110615	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/28/16 08:15	12/05/16 15:37	6110615	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:18	6110615	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:18	6110615	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Lithium	0.0108	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:36	6110615	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 16:18	6110616	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671
Client ID: FB-2
Date/Time Sampled: 11/21/2016 11:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZK0671-05
Date/Time Received: 11/21/2016 5:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/22/16 11:25	11/22/16 11:25	6110580	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	11/22/16 11:03	11/22/16 16:19	6110583	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 16:19	6110583	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 16:19	6110583	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:24	6110615	CSW
Barium	0.0035	0.0500	0.0004	mg/L	EPA 6020B	B-01, R-01, J	1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Boron	0.0134	0.0400	0.0064	mg/L	EPA 6020B	J	1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:24	6110615	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:24	6110615	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:24	6110615	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:41	6110615	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 16:20	6110616	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671
Client ID: RB-2
Date/Time Sampled: 11/21/2016 11:39:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZK0671-06
Date/Time Received: 11/21/2016 5:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/22/16 11:25	11/22/16 11:25	6110580	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	11/22/16 11:03	11/22/16 16:40	6110583	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 16:40	6110583	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	11/22/16 11:03	11/22/16 16:40	6110583	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:56	6110615	CSW
Barium	0.0038	0.0500	0.0004	mg/L	EPA 6020B	B-01, R-01, J	1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:56	6110615	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:56	6110615	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/28/16 08:15	12/03/16 14:56	6110615	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/28/16 08:15	12/01/16 19:58	6110615	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/28/16 10:35	11/28/16 16:22	6110616	MTC

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110580 - SM 2540 C											
Blank (6110580-BLK1)						Prepared & Analyzed: 11/22/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6110580-BS1)						Prepared & Analyzed: 11/22/16					
Total Dissolved Solids	398	25	10	mg/L	400.00		100	84-108			
Duplicate (6110580-DUP1)		**Source: AZK0671-01**				Prepared & Analyzed: 11/22/16					
Total Dissolved Solids	827	25	10	mg/L		795			4	10	
Duplicate (6110580-DUP2)		**Source: AZK0673-02**				Prepared & Analyzed: 11/22/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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December 06, 2016

Report No.: AZK0671

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110583 - EPA 300.0											
Blank (6110583-BLK1)						Prepared & Analyzed: 11/22/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6110583-BS1)						Prepared & Analyzed: 11/22/16					
Chloride	10.3	0.25	0.01	mg/L	10.010		103	90-110			
Fluoride	10.7	0.30	0.02	mg/L	10.020		106	90-110			
Sulfate	10.3	1.0	0.05	mg/L	10.020		102	90-110			
Matrix Spike (6110583-MS1)		**Source: AZK0671-02**				Prepared & Analyzed: 11/22/16					
Chloride	17.3	0.25	0.01	mg/L	10.010	7.76	95	90-110			
Fluoride	10.7	0.30	0.02	mg/L	10.020	0.04	106	90-110			
Sulfate	258	1.0	0.05	mg/L	10.020	271	NR	90-110			QM-02
Matrix Spike (6110583-MS2)		**Source: AZK0673-05**				Prepared & Analyzed: 11/22/16					
Chloride	10.7	0.25	0.01	mg/L	10.010	1.48	92	90-110			
Fluoride	10.0	0.30	0.02	mg/L	10.020	0.22	98	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.020	0.93	93	90-110			
Matrix Spike Dup (6110583-MSD1)		**Source: AZK0671-02**				Prepared & Analyzed: 11/22/16					
Chloride	18.0	0.25	0.01	mg/L	10.010	7.76	102	90-110	4	15	
Fluoride	11.4	0.30	0.02	mg/L	10.020	0.04	113	90-110	7	15	QM-05
Sulfate	257	1.0	0.05	mg/L	10.020	271	NR	90-110	0.4	15	QM-02

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Report No.: AZK0671

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110615 - EPA 3005A											
Blank (6110615-BLK1)						Prepared: 11/28/16 Analyzed: 12/01/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	0.0027	0.0100	0.0004	mg/L							J
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6110615-BS1)						Prepared: 11/28/16 Analyzed: 12/01/16					
Antimony	0.112	0.0030	0.0008	mg/L	0.10000		112	80-120			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000		100	80-120			
Barium	0.106	0.0100	0.0004	mg/L	0.10000		106	80-120			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000		101	80-120			
Boron	1.04	0.0400	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000		105	80-120			
Calcium	1.05	0.500	0.0311	mg/L	1.0000		105	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.0987	0.0250	0.0005	mg/L	0.10000		99	80-120			
Lead	0.107	0.0050	0.0001	mg/L	0.10000		107	80-120			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000		106	80-120			
Nickel	0.0990	0.0100	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0946	0.0100	0.0010	mg/L	0.10000		95	80-120			
Silver	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Thallium	0.108	0.0010	0.0002	mg/L	0.10000		108	80-120			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000		103	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.102	0.0500	0.0021	mg/L	0.10000		102	80-120			

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110615 - EPA 3005A											
Matrix Spike (6110615-MS1)		**Source: AZK0671-01**			Prepared: 11/28/16 Analyzed: 12/01/16						
Antimony	0.111	0.0030	0.0008	mg/L	0.10000	0.0009	110	75-125			
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	0.0034	105	75-125			
Barium	0.145	0.0100	0.0004	mg/L	0.10000	0.0428	102	75-125			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	0.0092	91	75-125			
Boron	2.91	0.200	0.0321	mg/L	1.0000	2.02	90	75-125			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	0.0005	103	75-125			
Calcium	48.7	2.50	0.155	mg/L	1.0000	46.4	229	75-125			QM-02
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	0.0030	102	75-125			
Cobalt	0.395	0.0100	0.0005	mg/L	0.10000	0.298	97	75-125			
Copper	0.112	0.0250	0.0005	mg/L	0.10000	0.0151	97	75-125			
Lead	0.0999	0.0050	0.0001	mg/L	0.10000	0.0005	99	75-125			
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125			
Nickel	0.203	0.0100	0.0006	mg/L	0.10000	0.103	101	75-125			
Selenium	0.144	0.0100	0.0010	mg/L	0.10000	0.0409	103	75-125			
Silver	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000	0.0004	102	75-125			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125			
Zinc	0.362	0.0100	0.0021	mg/L	0.10000	0.248	115	75-125			
Lithium	0.112	0.0500	0.0021	mg/L	0.10000	0.0223	90	75-125			
Matrix Spike Dup (6110615-MSD1)		**Source: AZK0671-01**			Prepared: 11/28/16 Analyzed: 12/01/16						
Antimony	0.116	0.0030	0.0008	mg/L	0.10000	0.0009	115	75-125	5	20	
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	0.0034	101	75-125	4	20	
Barium	0.150	0.0100	0.0004	mg/L	0.10000	0.0428	107	75-125	3	20	
Beryllium	0.0976	0.0030	0.00008	mg/L	0.10000	0.0092	88	75-125	3	20	
Boron	2.84	0.200	0.0321	mg/L	1.0000	2.02	82	75-125	2	20	
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000	0.0005	105	75-125	1	20	
Calcium	46.2	2.50	0.155	mg/L	1.0000	46.4	NR	75-125	5	20	QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	0.0030	99	75-125	3	20	
Cobalt	0.390	0.0100	0.0005	mg/L	0.10000	0.298	92	75-125	1	20	
Copper	0.107	0.0250	0.0005	mg/L	0.10000	0.0151	92	75-125	4	20	
Lead	0.0993	0.0050	0.0001	mg/L	0.10000	0.0005	99	75-125	0.7	20	
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125	0.05	20	
Nickel	0.194	0.0100	0.0006	mg/L	0.10000	0.103	92	75-125	5	20	
Selenium	0.139	0.0100	0.0010	mg/L	0.10000	0.0409	98	75-125	3	20	
Silver	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125	2	20	
Thallium	0.101	0.0010	0.0002	mg/L	0.10000	0.0004	101	75-125	1	20	
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125	2	20	
Zinc	0.350	0.0100	0.0021	mg/L	0.10000	0.248	102	75-125	3	20	
Lithium	0.114	0.0500	0.0021	mg/L	0.10000	0.0223	91	75-125	1	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110615 - EPA 3005A											
Post Spike (6110615-PS1)			**Source: AZK0671-01**			Prepared: 11/28/16 Analyzed: 12/01/16					
Antimony	108			ug/L	100.00	0.939	107	80-120			
Arsenic	105			ug/L	100.00	3.41	102	80-120			
Barium	143			ug/L	100.00	42.8	101	80-120			
Beryllium	96.6			ug/L	100.00	9.16	87	80-120			
Boron	2910			ug/L	1000.0	2020	89	80-120			
Cadmium	104			ug/L	100.00	0.548	103	80-120			
Calcium	47700			ug/L	1000.0	46400	129	80-120			QM-02
Chromium	101			ug/L	100.00	2.96	98	80-120			
Cobalt	393			ug/L	100.00	298	95	80-120			
Copper	105			ug/L	100.00	15.1	90	80-120			
Lead	100			ug/L	100.00	0.547	100	80-120			
Molybdenum	110			ug/L	100.00	0.407	110	80-120			
Nickel	193			ug/L	100.00	103	90	80-120			
Selenium	139			ug/L	100.00	40.9	99	80-120			
Silver	102			ug/L	100.00	0.0178	102	80-120			
Thallium	101			ug/L	100.00	0.433	101	80-120			
Vanadium	102			ug/L	100.00	-1.71	102	80-120			
Zinc	342			ug/L	100.00	248	95	80-120			
Lithium	111			ug/L	100.00	22.3	89	80-120			
Batch 6110616 - EPA 7470A											
Blank (6110616-BLK1)						Prepared & Analyzed: 11/28/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6110616-BS1)						Prepared & Analyzed: 11/28/16					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Report No.: AZK0671

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110616 - EPA 7470A											
Matrix Spike (6110616-MS1)		**Source: AZK0639-12**				Prepared & Analyzed: 11/28/16					
Mercury	0.00247	0.00050	0.000041	mg/L	2.5000E-3	ND	99	75-125			
Matrix Spike Dup (6110616-MSD1)		**Source: AZK0639-12**				Prepared & Analyzed: 11/28/16					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	1	20	
Post Spike (6110616-PS1)		**Source: AZK0639-12**				Prepared & Analyzed: 11/28/16					
Mercury	1.76			ug/L	1.6667	0.0114	105	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 06, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

R-01 Elevated reporting limit due to matrix interference.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com
Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308
T: 404-506-7239

REPORT TO: Jojo Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburan@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III and III (EPA 6020/7470)	Cl, F, SO4, and TDS (EPA 300.0 and SM 2540C)	Radium-226 and 228 (SW 846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	2	3		
11-21-16	0908	GW		✓	BRGWC-38S	3	1	1	1	1	
11-21-16	0948	GW		✓	BRGWC-32S	3	1	1	1	2	
11-21-16	1057	GW		✓	BRGWC-29I	3	1	1	1	3	
11-21-16	1058	GW		✓	BRGWC-30I	4	1	1	2	4	
11-21-16	1130	W		✓	FB-2	3	1	1	1	5	
11-21-16	1139	W		✓	RB-2	3	1	1	1	6	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: William Ballew, Geologist
DATE/TIME: 11-21-16 / 1215
RELINQUISHED BY: William Ballew
DATE/TIME: 11-21-16 / 1630
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY/LAB: Carla Hendrix
DATE/TIME: 11/21/16 1740
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS
Packed: No NA
Ice: Yes No NA
Temperature: 2°C Min: 2°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZK 0671
Entered into LIMS: CH
Tracking #:

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 12/6/2016 3:22:49PM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 11/21/16 17:40

Work Order: AZK0671
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 6 **#Containers:** 19

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

January 03, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 30203642

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on November 23, 2016. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 30203642

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 30203642

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30203642001	**BRGWC-38S**	Water	11/21/16 09:08	11/23/16 11:00
30203642002	**BRGWC-32S**	Water	11/21/16 09:48	11/23/16 11:00
30203642003	**BRGWC-29I**	Water	11/21/16 10:57	11/23/16 11:00
30203642004	**BRGWC-30I**	Water	11/21/16 10:58	11/23/16 11:00
30203642005	**FB-2**	Water	11/21/16 11:30	11/23/16 11:00
30203642006	**RB-2**	Water	11/21/16 11:39	11/23/16 11:00

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 30203642

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30203642001	**BRGWC-38S**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30203642002	**BRGWC-32S**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30203642003	**BRGWC-29I**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30203642004	**BRGWC-30I**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30203642005	**FB-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30203642006	**RB-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203642

Sample: BRGWC-38S **Lab ID: 30203642001** Collected: 11/21/16 09:08 Received: 11/23/16 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	**0.588 ± 0.270 (0.297) C:93% T:NA**	pCi/L	12/07/16 14:19	13982-63-3	
Radium-228	EPA 9320	**2.35 ± 0.647 (0.716) C:76% T:90%**	pCi/L	12/30/16 12:02	15262-20-1	
Total Radium	Total Radium Calculation	**2.94 ± 0.917 (1.01)**	pCi/L	01/03/17 16:24	7440-14-4	

Sample: BRGWC-32S **Lab ID: 30203642002** Collected: 11/21/16 09:48 Received: 11/23/16 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	**0.0569 ± 0.120 (0.283) C:93% T:NA**	pCi/L	12/07/16 14:19	13982-63-3	
Radium-228	EPA 9320	**-0.209 ± 0.339 (0.831) C:66% T:91%**	pCi/L	12/30/16 12:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.0569 ± 0.459 (1.11)**	pCi/L	01/03/17 16:24	7440-14-4	

Sample: BRGWC-29I **Lab ID: 30203642003** Collected: 11/21/16 10:57 Received: 11/23/16 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	**0.340 ± 0.209 (0.290) C:95% T:NA**	pCi/L	12/07/16 14:19	13982-63-3	
Radium-228	EPA 9320	**1.25 ± 0.523 (0.844) C:66% T:87%**	pCi/L	12/30/16 12:02	15262-20-1	
Total Radium	Total Radium Calculation	**1.59 ± 0.732 (1.13)**	pCi/L	01/03/17 16:24	7440-14-4	

Sample: BRGWC-30I **Lab ID: 30203642004** Collected: 11/21/16 10:58 Received: 11/23/16 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	**0.201 ± 0.118 (0.173) C:92% T:NA**	pCi/L	12/07/16 19:54	13982-63-3	
Radium-228	EPA 9320	**-0.130 ± 0.284 (0.712) C:68% T:79%**	pCi/L	12/30/16 12:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.201 ± 0.402 (0.885)**	pCi/L	01/03/17 16:24	7440-14-4	

Sample: FB-2 **Lab ID: 30203642005** Collected: 11/21/16 11:30 Received: 11/23/16 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	**-0.0479 ± 0.0673 (0.218) C:76% T:NA**	pCi/L	12/07/16 19:54	13982-63-3	
Radium-228	EPA 9320	**0.494 ± 0.446 (0.910) C:63% T:89%**	pCi/L	12/30/16 12:02	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203642

Sample: FB-2 **Lab ID: 30203642005** Collected: 11/21/16 11:30 Received: 11/23/16 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.494 ± 0.513 (1.13)**	pCi/L	01/03/17 16:24	7440-14-4	

Sample: RB-2 **Lab ID: 30203642006** Collected: 11/21/16 11:39 Received: 11/23/16 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	**-0.00215 ± 0.0763 (0.200) C:85% T:NA**	pCi/L	12/07/16 19:54	13982-63-3	
Radium-228	EPA 9320	**-0.194 ± 0.337 (0.829) C:65% T:87%**	pCi/L	12/30/16 12:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.000 ± 0.413 (1.03)**	pCi/L	01/03/17 16:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203642

QC Batch: 242765 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30203642001, 30203642002, 30203642003, 30203642004, 30203642005, 30203642006

METHOD BLANK: 1193274 Matrix: Water
Associated Lab Samples: 30203642001, 30203642002, 30203642003, 30203642004, 30203642005, 30203642006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.941 ± 0.448 (0.737) C:59% T:89%	pCi/L	12/30/16 12:03	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30203642

QC Batch: 241715 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30203642001, 30203642002, 30203642003, 30203642004, 30203642005, 30203642006

METHOD BLANK: 1188134 Matrix: Water
Associated Lab Samples: 30203642001, 30203642002, 30203642003, 30203642004, 30203642005, 30203642006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0598 ± 0.0776 (0.316) C:90% T:NA	pCi/L	12/07/16 12:32	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant Branch
Pace Project No.: 30203642

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.

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.

WO# : 30203642

30203642

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZK0671 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 12/23/2016

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
1	BRGWC-38S	G	11/21/2016 9:08	AZK0671-01	GW	1					X												
2	BRGWC-32S	G	11/21/2016 9:48	AZK0671-02	GW	1					X												
3	BRGWC-29I	G	11/21/2016 10:57	AZK0671-03	GW	1					X												
4	BRGWC-30I	G	11/21/2016 10:58	AZK0671-04	GW	2					X												
5	FB-2	G	11/21/2016 11:30	AZK0671-05	W	1					X												
6	RB-2	G	11/21/2016 11:39	AZK0671-06	W	1					X												
7																							
8																							
9																							
10																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	[signature]	11/22/16 1730	[signature]	11-23-16 1100	
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Sample Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30203642

8300

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308 T: 404-506-7239

REPORT TO: Soja Abraham

CC: Maria Padilla Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburan@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III and III (EPA 6020/7470)	Cl, F, SO4, and TDS (EPA 300.0 and SM 2540C)	Radium-226 and 228 (SW 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	2	3	
11-21-16	0908	GW		✓	BRGWC-38S	3	1	1	1	1
11-21-16	0948	GW		✓	BRGWC-32S	3	1	1	1	2
11-21-16	1057	GW		✓	BRGWC-29I	3	1	1	1	3
11-21-16	1058	GW		✓	BRGWC-30I	4	1	1	2	4
11-21-16	1130	W		✓	FB-2	3	1	1	1	5
11-21-16	1139	W		✓	RB-2	3	1	1	1	6

ANALYSIS REQUESTED

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Ballou, Geologist
DATE/TIME: 11-21-16 / 1215

RELINQUISHED BY: William Ballou
DATE/TIME: 11-21-16 / 1630

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Charles Hewins
DATE/TIME: 11/21/16 1740

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: 2 °C Min: 2°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AZK10671
Entered into LIMS: CH
Tracking #:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Georgia Project # 30203642

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 6812 5100 5833

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 11-28-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13. pH ≤2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH / Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present:			✓	15.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH / Date: 11-28-16

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	LAL
Date:	12/6/2016
Worklist:	32688
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1188134
MB concentration:	-0.060
M/B Counting Uncertainty:	0.077
MB MDC:	0.316
MB Numerical Performance Indicator:	-1.52
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32688	LCSD32688
Count Date:	12/7/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.673	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.510	
Target Conc. (pCi/L, g, F):	8.768	
Uncertainty (Calculated):	0.412	
Result (pCi/L, g, F):	7.758	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.592	
Numerical Performance Indicator:	-2.74	
Percent Recovery:	88.49%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30203642004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30203642004DUP	
Sample Result (pCi/L, g, F):	0.201	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.114	
Sample Duplicate Result (pCi/L, g, F):	0.151	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.115	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.606	30203642004
Duplicate RPD:	28.39%	30203642004DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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.

LMB 1/3/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	12/13/2016
Worklist:	32880
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1193274
MB concentration:	0.941
M/B Counting Uncertainty:	0.415
MB MDC:	0.737
MB Numerical Performance Indicator:	4.44
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32880	LCSD32880
Count Date:	12/30/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.690	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	6.340	
Uncertainty (Calculated):	0.456	
Result (pCi/L, g, F):	7.513	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.821	
Numerical Performance Indicator:	2.45	
Percent Recovery:	118.51%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30203642004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30203642004DUP	
Sample Result (pCi/L, g, F):	-0.130	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.283	
Sample Duplicate Result (pCi/L, g, F):	0.350	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.346	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.103	30203642004
Duplicate RPD:	437.77%	30203642004DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	

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.

***Batch must be re-prepped due to unacceptable precision.

12/13/17

LABORATORY ANALYTICAL DATA

February – March 2018

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AAB0789
March 07, 2017
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-2S	AAB0789-01	Ground Water	02/21/17 09:50	02/22/17 16:00
BRGWA-2I	AAB0789-02	Ground Water	02/21/17 11:13	02/22/17 16:00
BRGWA-12S	AAB0789-03	Ground Water	02/21/17 09:33	02/22/17 16:00
BRGWA-12I	AAB0789-04	Ground Water	02/21/17 11:08	02/22/17 16:00
BRGWA-23S	AAB0789-05	Ground Water	02/21/17 13:40	02/22/17 16:00
BRGWC-25I	AAB0789-06	Ground Water	02/21/17 13:30	02/22/17 16:00
BRGWC-27I	AAB0789-07	Ground Water	02/21/17 15:29	02/22/17 16:00
FB-1	AAB0789-08	Water	02/21/17 11:25	02/22/17 16:00
RB-1	AAB0789-09	Water	02/21/17 11:38	02/22/17 16:00
Dup-1	AAB0789-10	Ground Water	02/21/17 00:00	02/22/17 16:00

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Case Narrative

Plant Branch Report AAB0789 3/7/2017
Report revised per client request to move sample BRGWC-24S to a separate work order (now AAC0158).

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWA-2S
Date/Time Sampled: 2/21/2017 9:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-01
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	1.8	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 17:19	7020783	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	02/26/17 12:42	02/26/17 17:19	7020783	RLC
Sulfate	1.5	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 17:19	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Barium	0.0094	0.0100	0.0004	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Calcium	4.02	0.500	0.0311	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Chromium	0.0036	0.0100	0.0009	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Cobalt	0.0028	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:39	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:15	7020713	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWA-2I
Date/Time Sampled: 2/21/2017 11:13:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-02
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	68	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 17:40	7020783	RLC
Fluoride	0.14	0.30	0.004	mg/L	EPA 300.0	J	1	02/26/17 12:42	02/26/17 17:40	7020783	RLC
Sulfate	6.1	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 17:40	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Barium	0.0109	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Boron	0.0088	0.0400	0.0064	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Calcium	11.4	5.00	0.311	mg/L	EPA 6020B		10	02/23/17 14:50	02/27/17 14:10	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Molybdenum	0.0021	0.0100	0.0017	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Lithium	0.0128	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 16:50	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:17	7020713	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWA-12S
Date/Time Sampled: 2/21/2017 9:33:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-03
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	37	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	3.2	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 20:04	7020783	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	02/26/17 12:42	02/26/17 20:04	7020783	RLC
Sulfate	1.1	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 20:04	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Barium	0.0531	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Calcium	5.00	0.500	0.0311	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Chromium	0.0017	0.0100	0.0009	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:02	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:20	7020713	MTC

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Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWA-12I
Date/Time Sampled: 2/21/2017 11:08:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-04
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	71	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	3.2	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 20:25	7020783	RLC
Fluoride	0.16	0.30	0.004	mg/L	EPA 300.0	J	1	02/26/17 12:42	02/26/17 20:25	7020783	RLC
Sulfate	3.0	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 20:25	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Barium	0.0644	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Boron	0.0071	0.0400	0.0064	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Calcium	17.4	5.00	0.311	mg/L	EPA 6020B		10	02/23/17 14:50	02/27/17 14:15	7020699	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Lithium	0.0058	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:13	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:27	7020713	MTC

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Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWA-23S
Date/Time Sampled: 2/21/2017 1:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-05
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	151	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 21:06	7020783	RLC
Fluoride	0.10	0.30	0.004	mg/L	EPA 300.0	J	1	02/26/17 12:42	02/26/17 21:06	7020783	RLC
Sulfate	39	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 21:06	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Barium	0.0950	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Boron	0.0245	0.0400	0.0064	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Calcium	15.1	5.00	0.311	mg/L	EPA 6020B		10	02/23/17 14:50	02/27/17 14:21	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Cobalt	0.0045	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Selenium	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Lithium	0.0052	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:36	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:29	7020713	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWC-25I
Date/Time Sampled: 2/21/2017 1:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-06
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	497	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 21:27	7020783	RLC
Fluoride	0.60	0.30	0.004	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 21:27	7020783	RLC
Sulfate	360	10	0.92	mg/L	EPA 300.0		10	02/26/17 12:42	02/27/17 20:51	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Barium	0.0447	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Boron	1.55	0.0400	0.0064	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Calcium	80.9	25.0	1.55	mg/L	EPA 6020B		50	02/23/17 14:50	02/25/17 17:53	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Cobalt	0.0079	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:48	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:31	7020713	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: BRGWC-27I
Date/Time Sampled: 2/21/2017 3:29:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-07
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	380	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	5.1	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 21:48	7020783	RLC
Fluoride	0.35	0.30	0.004	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 21:48	7020783	RLC
Sulfate	270	10	0.92	mg/L	EPA 300.0		10	02/26/17 12:42	02/27/17 21:12	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Barium	0.0150	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Boron	1.39	0.0400	0.0064	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Calcium	75.1	25.0	1.55	mg/L	EPA 6020B		50	02/23/17 14:50	02/25/17 18:05	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Cobalt	0.0099	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Selenium	0.0025	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 17:59	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:34	7020713	MTC

PACE ANALYTICAL SERVICES, LLC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: FB-1
Date/Time Sampled: 2/21/2017 11:25:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAB0789-08
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:08	7020783	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:08	7020783	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:08	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:11	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:36	7020713	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: RB-1
Date/Time Sampled: 2/21/2017 11:38:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAB0789-09
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:29	7020783	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:29	7020783	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:29	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Barium	0.0005	0.0100	0.0004	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:16	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 14:38	7020713	MTC

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789
Client ID: Dup-1
Date/Time Sampled: 2/21/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0789-10
Date/Time Received: 2/22/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	97	25	10	mg/L	SM 2540 C		1	02/24/17 12:40	02/24/17 12:40	7020729	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:50	7020783	RLC
Fluoride	0.08	0.30	0.004	mg/L	EPA 300.0	J	1	02/26/17 12:42	02/26/17 22:50	7020783	RLC
Sulfate	50	1.0	0.09	mg/L	EPA 300.0		1	02/26/17 12:42	02/26/17 22:50	7020783	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Barium	0.0821	0.0100	0.0004	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Boron	0.0224	0.0400	0.0064	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Calcium	11.9	5.00	0.311	mg/L	EPA 6020B		10	02/23/17 14:50	02/27/17 14:27	7020699	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Cobalt	0.0039	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Selenium	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Lithium	0.0049	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/23/17 14:50	02/25/17 18:22	7020699	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:00	7020714	MTC

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March 07, 2017

Report No.: AAB0789

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020729 - SM 2540 C											
Blank (7020729-BLK1)						Prepared & Analyzed: 02/24/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7020729-BS1)						Prepared & Analyzed: 02/24/17					
Total Dissolved Solids	357	25	10	mg/L	400.00		89	84-108			
Duplicate (7020729-DUP1)		**Source: AAB0789-08**				Prepared & Analyzed: 02/24/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7020729-DUP2)		**Source: AAB0790-03**				Prepared & Analyzed: 02/24/17					
Total Dissolved Solids	208	25	10	mg/L		198			5	10	

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Report No.: AAB0789

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020783 - EPA 300.0											
Blank (7020783-BLK1)						Prepared & Analyzed: 02/26/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7020783-BS1)						Prepared & Analyzed: 02/26/17					
Chloride	10.4	0.25	0.01	mg/L	10.010		104	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		103	90-110			
Sulfate	10.5	1.0	0.09	mg/L	10.020		105	90-110			
Matrix Spike (7020783-MS1)		**Source: AAB0789-02**				Prepared & Analyzed: 02/26/17					
Chloride	12.4	0.25	0.01	mg/L	10.010	2.02	104	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.14	102	90-110			
Sulfate	15.9	1.0	0.09	mg/L	10.020	6.08	98	90-110			
Matrix Spike (7020783-MS2)		**Source: AAB0789-04**				Prepared & Analyzed: 02/26/17					
Chloride	13.8	0.25	0.01	mg/L	10.010	3.23	105	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.16	105	90-110			
Sulfate	13.3	1.0	0.09	mg/L	10.020	2.99	103	90-110			
Matrix Spike Dup (7020783-MSD1)		**Source: AAB0789-02**				Prepared & Analyzed: 02/26/17					
Chloride	12.5	0.25	0.01	mg/L	10.010	2.02	104	90-110	0.6	15	
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.14	103	90-110	0.4	15	
Sulfate	16.0	1.0	0.09	mg/L	10.020	6.08	99	90-110	0.4	15	

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Report No.: AAB0789

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020699 - EPA 3005A											
Blank (7020699-BLK1)						Prepared: 02/23/17 Analyzed: 02/25/17					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (7020699-BS1)						Prepared: 02/23/17 Analyzed: 02/25/17					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000		107	80-120			
Arsenic	0.0985	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.104	0.0100	0.0004	mg/L	0.10000		104	80-120			
Beryllium	0.102	0.0030	0.00008	mg/L	0.10000		102	80-120			
Boron	1.02	0.0400	0.0064	mg/L	1.0000		102	80-120			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000		105	80-120			
Calcium	0.995	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.107	0.0100	0.0009	mg/L	0.10000		107	80-120			
Cobalt	0.0980	0.0100	0.0005	mg/L	0.10000		98	80-120			
Copper	0.102	0.0250	0.0005	mg/L	0.10000		102	80-120			
Lead	0.101	0.0050	0.0001	mg/L	0.10000		101	80-120			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000		109	80-120			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.0997	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Thallium	0.103	0.0010	0.0002	mg/L	0.10000		103	80-120			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000		104	80-120			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000		105	80-120			
Lithium	0.0985	0.0500	0.0021	mg/L	0.10000		98	80-120			

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March 07, 2017

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020699 - EPA 3005A											
Matrix Spike (7020699-MS1)		**Source: AAB0741-01**			Prepared: 02/23/17 Analyzed: 02/25/17						
Antimony	0.113	0.0030	0.0008	mg/L	0.10000	0.0057	107	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.120	0.0100	0.0004	mg/L	0.10000	0.0178	103	75-125			
Beryllium	0.105	0.0030	0.00008	mg/L	0.10000	ND	105	75-125			
Boron	1.06	0.0400	0.0064	mg/L	1.0000	0.0218	104	75-125			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125			
Calcium	32.4	25.0	1.55	mg/L	1.0000	31.7	70	75-125			QM-02
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	0.0010	104	75-125			
Cobalt	0.0976	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Copper	0.104	0.0250	0.0005	mg/L	0.10000	ND	104	75-125			
Lead	0.100	0.0050	0.0001	mg/L	0.10000	ND	100	75-125			
Molybdenum	0.112	0.0100	0.0017	mg/L	0.10000	0.0049	107	75-125			
Nickel	0.101	0.0100	0.0006	mg/L	0.10000	0.0007	101	75-125			
Selenium	0.0984	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125			
Vanadium	0.109	0.0100	0.0071	mg/L	0.10000	ND	109	75-125			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	0.0049	101	75-125			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000	ND	103	75-125			
Matrix Spike Dup (7020699-MSD1)		**Source: AAB0741-01**			Prepared: 02/23/17 Analyzed: 02/25/17						
Antimony	0.113	0.0030	0.0008	mg/L	0.10000	0.0057	108	75-125	0.7	20	
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125	0.4	20	
Barium	0.123	0.0100	0.0004	mg/L	0.10000	0.0178	105	75-125	2	20	
Beryllium	0.109	0.0030	0.00008	mg/L	0.10000	ND	109	75-125	4	20	
Boron	1.02	0.0400	0.0064	mg/L	1.0000	0.0218	100	75-125	4	20	
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000	ND	103	75-125	2	20	
Calcium	32.6	25.0	1.55	mg/L	1.0000	31.7	89	75-125	0.6	20	
Chromium	0.111	0.0100	0.0009	mg/L	0.10000	0.0010	110	75-125	5	20	
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	4	20	
Copper	0.104	0.0250	0.0005	mg/L	0.10000	ND	104	75-125	0.2	20	
Lead	0.102	0.0050	0.0001	mg/L	0.10000	ND	102	75-125	2	20	
Molybdenum	0.111	0.0100	0.0017	mg/L	0.10000	0.0049	106	75-125	0.8	20	
Nickel	0.103	0.0100	0.0006	mg/L	0.10000	0.0007	103	75-125	2	20	
Selenium	0.100	0.0100	0.0010	mg/L	0.10000	ND	100	75-125	2	20	
Silver	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125	2	20	
Thallium	0.107	0.0010	0.0002	mg/L	0.10000	ND	107	75-125	3	20	
Vanadium	0.114	0.0100	0.0071	mg/L	0.10000	ND	114	75-125	5	20	
Zinc	0.111	0.0100	0.0021	mg/L	0.10000	0.0049	106	75-125	4	20	
Lithium	0.104	0.0500	0.0021	mg/L	0.10000	ND	104	75-125	0.9	20	

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Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020699 - EPA 3005A											
Post Spike (7020699-PS1)			**Source: AAB0741-01**			Prepared: 02/23/17 Analyzed: 02/25/17					
Antimony	101			ug/L	100.00	5.71	95	80-120			
Arsenic	107			ug/L	100.00	0.925	106	80-120			
Barium	117			ug/L	100.00	17.8	99	80-120			
Beryllium	112			ug/L	100.00	0.0014	112	80-120			
Boron	1100			ug/L	1000.0	21.8	108	80-120			
Cadmium	104			ug/L	100.00	-0.0021	104	80-120			
Calcium	32700			ug/L	1000.0	31700	104	80-120			
Chromium	111			ug/L	100.00	1.03	110	80-120			
Cobalt	96.9			ug/L	100.00	0.167	97	80-120			
Copper	106			ug/L	100.00	0.267	106	80-120			
Lead	101			ug/L	100.00	0.0835	101	80-120			
Molybdenum	114			ug/L	100.00	4.94	109	80-120			
Nickel	101			ug/L	100.00	0.653	100	80-120			
Selenium	101			ug/L	100.00	0.920	100	80-120			
Silver	102			ug/L	100.00	0.0060	102	80-120			
Thallium	103			ug/L	100.00	0.0169	103	80-120			
Vanadium	113			ug/L	100.00	0.937	112	80-120			
Zinc	122			ug/L	100.00	4.93	118	80-120			
Lithium	107			ug/L	100.00	0.225	107	80-120			
Batch 7020713 - EPA 7470A											
Blank (7020713-BLK1)						Prepared & Analyzed: 02/24/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7020713-BS1)						Prepared & Analyzed: 02/24/17					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 07, 2017

Report No.: AAB0789

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020713 - EPA 7470A											
Matrix Spike (7020713-MS1)			**Source: AAB0789-01**			Prepared & Analyzed: 02/24/17					
Mercury	0.00231	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125			
Matrix Spike Dup (7020713-MSD1)			**Source: AAB0789-01**			Prepared & Analyzed: 02/24/17					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125	2	20	
Post Spike (7020713-PS1)			**Source: AAB0789-01**			Prepared & Analyzed: 02/24/17					
Mercury	1.64			ug/L	1.6667	-0.00567	98	80-120			
Batch 7020714 - EPA 7470A											
Blank (7020714-BLK1)						Prepared & Analyzed: 02/24/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7020714-BS1)						Prepared & Analyzed: 02/24/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
Matrix Spike (7020714-MS1)			**Source: AAB0789-10**			Prepared & Analyzed: 02/24/17					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (7020714-MSD1)			**Source: AAB0789-10**			Prepared & Analyzed: 02/24/17					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	2	20	
Post Spike (7020714-PS1)			**Source: AAB0789-10**			Prepared & Analyzed: 02/24/17					
Mercury	1.67			ug/L	1.6667	-0.0218	100	80-120			

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

March 07, 2017

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com
Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE:
PO #: labarch@Southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: State CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App III & III (EPA 6020 / 7470)	Cl, F, SO4, and TDS (EPA 300.0 and SM 2540C)	Radium 226 and 228 (SW-846 9315 / 9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	1	3							
2/21/17	0950	GW		X	BRGWA-2S	4		1	1	2							1
2/21/17	1113	GW		X	BRGWA-2I	4		1	1	2							2
2/21/17	0933	GW		X	BRGWA-12S	4		1	1	2							3
2/21/17	1108	GW		X	BRGWA-12I	4		1	1	2							4
2/21/17	1340	GW		X	BRGWA-23S	4		1	1	2							5
2/21/17	1330	GW		X	BRGWL-25I	4		1	1	2							6
2/21/17	1529	GW		X	BRGWL-27I	6		1	1	4							7
2/21/17	1125	W		X	FB-1	4		1	1	2							8
2/21/17	1138	W		X	RB-1	4		1	1	2							9
2/21/17	—	GW		X	DUP-1	4		1	1	2							10

ANALYSIS REQUESTED

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Travis Martinez, Scientist
DATE/TIME: 2/21/17 1640
RELINQUISHED BY:
DATE/TIME: 2/22/17 0845
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

FOR LAB USE ONLY
LAB #: AA80789
Entered into LIMS: MR

RECEIVED BY LAB: Raman
DATE/TIME: 02/22/17 1600
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS
Tracking #:
Packed: No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

COC Revised 2016-05-17.xlsx

6994

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

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110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
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PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308
P: 404-506-7239

REPORT TO: Soja Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE: -
PO #: labcrch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III + III (EPA 6020 / 4470)	Cl, F, SO4, and TDS (EPA 300.0 and SM 2540C)	Radium-226 and 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	3	
2-21-17	1534	GW		X	BRGWC-245	4	1	1	2	11

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Ballou, Geologist
DATE/TIME: 2-21-17 / 1645
RELINQUISHED BY: William Ballou
DATE/TIME: 2/22/17 0845

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

FOR LAB USE ONLY
LAB #: AA80789
Entered into LIMS: MR

RECEIVED BY LAB: Latman
DATE/TIME: 02/22/17 1600
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS
Tracking #:

Checked: No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

PACE ANALYTICAL SERVICES, LLC.

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LOG-IN CHECKLIST

Printed: 2/23/2017 1:45:43PM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 02/22/17 16:00

Work Order: AAB0789
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 11 **#Containers:** 46

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

March 22, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on February 24, 2017. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30211811001	**BRGWA-2S**	Water	02/21/17 09:50	02/24/17 12:25
30211811002	**BRGWA-2I**	Water	02/21/17 11:13	02/24/17 12:25
30211811003	**BRGWA-12S**	Water	02/21/17 09:33	02/24/17 12:25
30211811004	**BRGWA-12I**	Water	02/21/17 11:08	02/24/17 12:25
30211811005	**BRGWA-23S**	Water	02/21/17 13:40	02/24/17 12:25
30211811006	**BRGWC-25I**	Water	02/21/17 13:30	02/24/17 12:25
30211811007	**BRGWC-27I**	Water	02/21/17 15:29	02/24/17 12:25
30211811008	**FB-1**	Water	02/21/17 11:25	02/24/17 12:25
30211811009	**RB-1**	Water	02/21/17 11:38	02/24/17 12:25
30211811010	**Dup-1**	Water	02/21/17 00:00	02/24/17 12:25

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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SAMPLE ANALYTE COUNT

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30211811001	**BRGWA-2S**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811002	**BRGWA-2I**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811003	**BRGWA-12S**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811004	**BRGWA-12I**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811005	**BRGWA-23S**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811006	**BRGWC-25I**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	JAL	1
30211811007	**BRGWC-27I**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811008	**FB-1**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811009	**RB-1**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30211811010	**Dup-1**	EPA 9315	LAL	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Sample: BRGWA-2S **Lab ID: 30211811001** Collected: 02/21/17 09:50 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.100 ± 0.129 (0.257) C:95% T:NA**	pCi/L	03/10/17 10:12	13982-63-3	
Radium-228	EPA 9320	**0.860 ± 0.904 (1.88) C:38% T:71%**	pCi/L	03/16/17 11:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.960 ± 1.03 (2.14)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: BRGWA-2I **Lab ID: 30211811002** Collected: 02/21/17 11:13 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0261 ± 0.0613 (0.186) C:95% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.828 (1.66) C:36% T:84%**	pCi/L	03/16/17 11:22	15262-20-1	
Total Radium	Total Radium Calculation	**1.01 ± 0.889 (1.85)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: BRGWA-12S **Lab ID: 30211811003** Collected: 02/21/17 09:33 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0715 ± 0.0845 (0.169) C:95% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**0.246 ± 0.893 (2.02) C:32% T:81%**	pCi/L	03/16/17 11:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.318 ± 0.978 (2.19)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: BRGWA-12I **Lab ID: 30211811004** Collected: 02/21/17 11:08 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.169 ± 0.110 (0.173) C:97% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**1.58 ± 1.02 (1.92) C:39% T:76%**	pCi/L	03/16/17 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.75 ± 1.13 (2.09)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: BRGWA-23S **Lab ID: 30211811005** Collected: 02/21/17 13:40 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.242 ± 0.134 (0.194) C:88% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**0.353 ± 0.932 (2.08) C:37% T:72%**	pCi/L	03/16/17 16:56	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Sample: BRGWA-23S **Lab ID: 30211811005** Collected: 02/21/17 13:40 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.595 ± 1.07 (2.27)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: BRGWC-25I **Lab ID: 30211811006** Collected: 02/21/17 13:30 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.219 ± 0.119 (0.170) C:102% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**1.09 ± 0.514 (0.879) C:75% T:72%**	pCi/L	03/22/17 11:48	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.633 (1.05)**	pCi/L	03/22/17 17:17	7440-14-4	

Sample: BRGWC-27I **Lab ID: 30211811007** Collected: 02/21/17 15:29 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.111 ± 0.117 (0.235) C:98% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**1.17 ± 1.13 (2.33) C:32% T:75%**	pCi/L	03/16/17 16:56	15262-20-1	
Total Radium	Total Radium Calculation	**1.28 ± 1.25 (2.57)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: FB-1 **Lab ID: 30211811008** Collected: 02/21/17 11:25 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0443 ± 0.0452 (0.170) C:98% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**1.66 ± 1.12 (2.13) C:32% T:75%**	pCi/L	03/16/17 16:56	15262-20-1	
Total Radium	Total Radium Calculation	**1.66 ± 1.17 (2.30)**	pCi/L	03/21/17 15:23	7440-14-4	

Sample: RB-1 **Lab ID: 30211811009** Collected: 02/21/17 11:38 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0290 ± 0.0491 (0.164) C:99% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**2.64 ± 1.28 (2.19) C:31% T:78%**	pCi/L	03/16/17 16:56	15262-20-1	
Total Radium	Total Radium Calculation	**2.64 ± 1.33 (2.35)**	pCi/L	03/21/17 15:23	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

Sample: Dup-1 **Lab ID: 30211811010** Collected: 02/21/17 00:00 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.297 ± 0.170 (0.241) C:63% T:NA**	pCi/L	03/17/17 09:05	13982-63-3	
Radium-228	EPA 9320	**-0.182 ± 0.643 (1.55) C:41% T:82%**	pCi/L	03/16/17 16:56	15262-20-1	
Total Radium	Total Radium Calculation	**0.297 ± 0.813 (1.79)**	pCi/L	03/21/17 15:23	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

QC Batch: 251402 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30211811001

METHOD BLANK: 1236939 Matrix: Water
Associated Lab Samples: 30211811001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0711 ± 0.137 (0.311) C:100% T:NA	pCi/L	03/09/17 08:55	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

QC Batch: 251729 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30211811002, 30211811003, 30211811004, 30211811005, 30211811006, 30211811007, 30211811008, 30211811009, 30211811010

METHOD BLANK: 1238336 Matrix: Water
Associated Lab Samples: 30211811002, 30211811003, 30211811004, 30211811005, 30211811006, 30211811007, 30211811008, 30211811009, 30211811010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0778 ± 0.0850 (0.162) C:88% T:NA	pCi/L	03/17/17 09:05	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

QC Batch: 251825 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30211811001, 30211811002, 30211811003, 30211811004, 30211811005, 30211811006, 30211811007, 30211811008, 30211811009, 30211811010

METHOD BLANK: 1238956 Matrix: Water
Associated Lab Samples: 30211811001, 30211811002, 30211811003, 30211811004, 30211811005, 30211811006, 30211811007, 30211811008, 30211811009, 30211811010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0225 ± 0.967 (2.22) C:20% T:79%	pCi/L	03/16/17 11:27	1c
Radium-228	0.155 ± 0.391 (0.872) C:75% T:70%	pCi/L	03/22/17 11:48	

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAB0789 Plant Branch
Pace Project No.: 30211811

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.

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.

ANALYTE QUALIFIERS

1c	Method Blank yttrium carrier yield is less than the 30% default minimum acceptable for carrier yield. The MB has been re-ingrowthed and will be re-analyzed on 3/22/2017.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAB0789 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 2/17/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

WO#:30211811

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	BRGWA-2S	G	2/21/2017 9:50	AAB0789-01	GW	2	X	001
2	BRGWA-2I	G	2/21/2017 11:13	AAB0789-02	GW	2	X	002
3	BRGWA-12S	G	2/21/2017 9:33	AAB0789-03	GW	2	X	003
4	BRGWA-12I	G	2/21/2017 11:08	AAB0789-04	GW	2	X	004
5	BRGWA-23S	G	2/21/2017 13:40	AAB0789-05	GW	2	X	005
6	BRGWC-25I	G	2/21/2017 13:30	AAB0789-06	GW	2	X	006
7	BRGWC-27I	G	2/21/2017 15:29	AAB0789-07	GW	4	X	007
8	FB-1	G	2/21/2017 11:25	AAB0789-08	~~GW~~ W	2 BMN 2/23/2017	X	008
9	RB-1	G	2/21/2017 11:38	AAB0789-09	~~GW~~ W	2	X	009
10	Dup-1	G	2/21/2017 0:00	AAB0789-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Hill	2/24/17 1225	
2					
3					

Cooler Temperature on Receipt N/A °C | **Custody Seal Y or (N)** | **Received on Ice Y or (N)** | **Sample Intact (Y) or N**

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30211811

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAB0789 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 2/17/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	BRGWC-24S	G	2/21/2017 15:34	AAB0789-11	GW	2	X	011
12								
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Kwan Hill	2/24/17 1225	
2					
3					

Cooler Temperature on Receipt N/A °C | **Custody Seal Y or (N)** | **Received on Ice Y or (N)** | **Sample Intact (Y) or N**

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30211811

6996

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Jaju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE:
PO #: labarch@Southernco.com

PROJECT NAME/STATE:
Plant Branch AP

PROJECT #:
State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & III (EPA 6020 / 7470)	Cl, F, SO4, and TDS (EPA 300.0 and SM 2540)	Radium 226 and 228 (SW-846 9315 / 9320)	LAB ID NUMBER
	CONTAINER TYPE:						P	P	P	
	PRESERVATION:						3	1	3	
2/21/17	0950	GW		X	BRGWA-2S	4	1	1	2	1
2/21/17	1113	GW		X	BRGWA-2I	4	1	1	2	2
2/21/17	0933	GW		X	BRGWA-12S	4	1	1	2	3
2/21/17	1108	GW		X	BRGWA-12I	4	1	1	2	4
2/21/17	1340	GW		X	BRGWA-23S	4	1	1	2	5
2/21/17	1330	GW		X	BRGWL-25I	4	1	1	2	6
2/21/17	1529	GW		X	BRGWL-27I	6	1	1	4	7
2/21/17	1125	W		X	FB-1	4	1	1	2	8
2/21/17	1138	W		X	RB-1	4	1	1	2	9
2/21/17	—	GW		X	DUP-1	4	1	1	2	10

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Travis Mahmer, Scientist
DATE/TIME: 2/21/17 1640

RELINQUISHED BY:
DATE/TIME: 2/22/17 0845

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Rahman
DATE/TIME: 02/22/17 1600

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AA00789
Entered into LIMS: MR
Tracking #:

COC Revised 2016-05-17.xlsx

30211811

6994

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308
P: 404-506-7239

REPORT TO: John Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE: -
PO #: labcrch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE: P	P	P	LAB ID NUMBER
							PRESERVATION: 3	1	3	
							Metals App. III + III (EPA 6020) / 4470	Cl, F, SO4, and TDS (EPA 300.0 and SM 2540C)	Radium-226 and 228 (SM-9315/9320)	
2-21-17	1534	GW		X	BRGWC-245	4	1	1	2	11

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Ballew, Geologist
DATE/TIME: 2-21-17 1645
RELINQUISHED BY: William Baker
DATE/TIME: 2/22/17 0845

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

FOR LAB USE ONLY
LAB #: AA00789
Entered Into LIMS: MR

RECEIVED BY LAB: Mallman
DATE/TIME: 02/22/17 1600

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Tracking #:

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

COC Revised 2016-05-17.xlsx

ML

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Atlanta Project # 30211811

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 0812 5102 5695

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 2/24/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation.	✓			15. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH; Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH; Date: 2/24/17

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: Sample all canceled via this WO and logged under WO 30212563 as per client request

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	3/9/2017
Worklist:	34416
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1236939
MB concentration:	0.071
M/B Counting Uncertainty:	0.137
MB MDC:	0.311
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
	LCS34416	LCSD34416
Count Date:	3/10/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.231	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.507	
Target Conc. (pCi/L, g, F):	18.837	
Uncertainty (Calculated):	0.886	
Result (pCi/L, g, F):	15.438	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.167	
Numerical Performance Indicator:	-4.55	
Percent Recovery:	81.95%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30211537006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30211537006DUP	
Sample Result (pCi/L, g, F):	0.608	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.272	
Sample Duplicate Result (pCi/L, g, F):	0.852	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.330	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	*-1.117	30211537006
Duplicate RPD:	33.36%	30211537006DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments: * Numerical Indicator is acceptable.

3/22/17

***Batch must be re-prepped due to unacceptable precision.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	LAL
Date:	3/15/2017
Worklist:	34493
Matrix:	DW

Method Blank Assessment

MB Sample ID	1238336
MB concentration:	0.078
M/B Counting Uncertainty:	0.084
MB MDC:	0.162
MB Numerical Performance Indicator:	1.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS34493	**LCSD34493**
Count Date:	3/20/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.230	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	19.092	
Uncertainty (Calculated):	0.898	
Result (pCi/L, g, F):	16.544	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.905	
Numerical Performance Indicator:	-3.92	
Percent Recovery:	86.65%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment

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):	
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:	

Duplicate Sample Assessment

Sample I.D.:	30211811002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30211811002DUP	
Sample Result (pCi/L, g, F):	-0.026	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.061	
Sample Duplicate Result (pCi/L, g, F):	0.058	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.085	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.574	30211811002
Duplicate RPD:	524.01%	30211811002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments: * Numerical Indicator is acceptable.

***Batch must be re-prepped due to unacceptable precision.

3/22/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JJY
Date:	3/14/2017
Worklist:	34511
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1238956
MB concentration:	-0.022
M/B Counting Uncertainty:	0.967
MB MDC:	2.218
MB Numerical Performance Indicator:	-0.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS34511	LCSD34511
Count Date:	3/16/2017	3/16/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	25.026	25.026
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.803
Target Conc. (pCi/L, g, F):	6.191	6.231
Uncertainty (Calculated):	0.446	0.449
Result (pCi/L, g, F):	7.748	6.245
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.318	0.971
Numerical Performance Indicator:	2.19	0.03
Percent Recovery:	125.14%	100.23%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS34511	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD34511	
Sample Result (pCi/L, g, F):	7.748	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.318	
Sample Duplicate Result (pCi/L, g, F):	6.245	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.971	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	1.799	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.11%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

3/22/17

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AAB0838
March 02, 2017
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWC-29I	AAB0838-01	Ground Water	02/22/17 09:57	02/23/17 15:30
BRGWC-30I	AAB0838-02	Ground Water	02/22/17 14:20	02/23/17 15:30
BRGWC-32S	AAB0838-03	Ground Water	02/22/17 11:10	02/23/17 15:30
BRGWC-33S	AAB0838-04	Ground Water	02/22/17 12:33	02/23/17 15:30
BRGWC-34S	AAB0838-05	Ground Water	02/22/17 14:28	02/23/17 15:30
BRGWC-17S	AAB0838-06	Ground Water	02/22/17 15:50	02/23/17 15:30
BRGWC-35S	AAB0838-07	Ground Water	02/22/17 15:56	02/23/17 15:30
RB-2	AAB0838-08	Water	02/22/17 14:18	02/23/17 15:30
FB-2	AAB0838-09	Water	02/22/17 15:44	02/23/17 15:30
Dup-2	AAB0838-10	Ground Water	02/22/17 00:00	02/23/17 15:30

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-29I
Date/Time Sampled: 2/22/2017 9:57:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-01
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	721	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	6.2	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 18:10	7020835	RLC
Fluoride	0.37	0.30	0.004	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 18:10	7020835	RLC
Sulfate	570	20	1.8	mg/L	EPA 300.0		20	02/28/17 09:53	03/02/17 10:54	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Barium	0.0179	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Beryllium	0.0014	0.0030	0.00008	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Boron	1.50	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Calcium	105	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 19:48	7020761	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Cobalt	0.0136	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Lead	0.0005	0.0050	0.0001	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Selenium	0.0050	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Lithium	0.0043	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:42	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:28	7020714	MTC

PACE ANALYTICAL SERVICES, LLC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-30I
Date/Time Sampled: 2/22/2017 2:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-02
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	504	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	5.6	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 18:31	7020835	RLC
Fluoride	0.20	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 18:31	7020835	RLC
Sulfate	280	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 12:17	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Barium	0.0219	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Boron	1.48	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Calcium	62.1	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 20:00	7020761	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Lithium	0.0103	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 19:54	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:31	7020714	MTC

PACE ANALYTICAL SERVICES, LLC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-32S
Date/Time Sampled: 2/22/2017 11:10:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-03
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	635	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 19:12	7020835	RLC
Fluoride	0.08	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 19:12	7020835	RLC
Sulfate	380	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 12:39	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Barium	0.0498	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Boron	1.43	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Calcium	67.3	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 20:11	7020761	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Selenium	0.0017	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Lithium	0.0023	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:05	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:33	7020714	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-33S
Date/Time Sampled: 2/22/2017 12:33:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-04
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	387	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	0.12	0.25	0.01	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 19:33	7020835	RLC
Fluoride	0.21	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 19:33	7020835	RLC
Sulfate	210	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 13:21	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Barium	0.0243	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Beryllium	0.0022	0.0030	0.00008	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Boron	1.44	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Cadmium	0.0006	0.0010	0.00007	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Calcium	53.1	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 20:23	7020761	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Cobalt	0.0567	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Selenium	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Lithium	0.0106	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:17	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:35	7020714	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-34S
Date/Time Sampled: 2/22/2017 2:28:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-05
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	706	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	7.1	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 19:53	7020835	RLC
Fluoride	0.17	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 19:53	7020835	RLC
Sulfate	410	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 13:42	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Barium	0.0415	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Boron	2.09	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Cadmium	0.0005	0.0010	0.00007	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Calcium	106	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 20:45	7020761	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Cobalt	0.0041	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:40	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:38	7020714	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-17S
Date/Time Sampled: 2/22/2017 3:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-06
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	341	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	3.6	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 20:14	7020835	RLC
Fluoride	0.11	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 20:14	7020835	RLC
Sulfate	120	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 14:03	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Barium	0.0392	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Calcium	33.5	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 20:57	7020761	CSW
Chromium	0.0122	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Selenium	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 20:51	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:45	7020714	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: BRGWC-35S
Date/Time Sampled: 2/22/2017 3:56:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-07
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	541	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	5.6	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 20:35	7020835	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 20:35	7020835	RLC
Sulfate	270	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 14:25	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Barium	0.0701	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Boron	1.35	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Calcium	64.6	25.0	1.55	mg/L	EPA 6020B		50	02/27/17 09:10	02/28/17 21:08	7020761	CSW
Chromium	0.0040	0.0100	0.0009	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Lithium	0.0023	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 21:03	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:47	7020714	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: RB-2
Date/Time Sampled: 2/22/2017 2:18:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAB0838-08
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	22	25	10	mg/L	SM 2540 C	J	1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:18	7020835	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:18	7020835	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:18	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:14	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:50	7020714	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: FB-2
Date/Time Sampled: 2/22/2017 3:44:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAB0838-09
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	17	25	10	mg/L	SM 2540 C	J	1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:38	7020835	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:38	7020835	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:38	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:20	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:52	7020714	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838
Client ID: Dup-2
Date/Time Sampled: 2/22/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAB0838-10
Date/Time Received: 2/23/2017 3:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	348	25	10	mg/L	SM 2540 C		1	02/27/17 15:40	02/27/17 15:40	7020794	JPT
Inorganic Anions											
Chloride	3.7	0.25	0.01	mg/L	EPA 300.0		1	02/28/17 09:53	02/28/17 22:59	7020835	RLC
Fluoride	0.11	0.30	0.004	mg/L	EPA 300.0	J	1	02/28/17 09:53	02/28/17 22:59	7020835	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	02/28/17 09:53	03/01/17 14:46	7020835	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Barium	0.0414	0.0100	0.0004	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Calcium	31.8	2.50	0.155	mg/L	EPA 6020B		5	02/27/17 09:10	02/28/17 21:48	7020761	CSW
Chromium	0.0118	0.0100	0.0009	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Selenium	0.0024	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/27/17 09:10	02/28/17 21:25	7020761	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/24/17 10:20	02/24/17 15:55	7020714	MTC

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Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020794 - SM 2540 C											
Blank (7020794-BLK1)						Prepared & Analyzed: 02/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7020794-BS1)						Prepared & Analyzed: 02/27/17					
Total Dissolved Solids	418	25	10	mg/L	400.00		104	84-108			
Duplicate (7020794-DUP1)		**Source: AAB0838-02**				Prepared & Analyzed: 02/27/17					
Total Dissolved Solids	520	25	10	mg/L		504			3	10	
Duplicate (7020794-DUP2)		**Source: AAB0838-08**				Prepared & Analyzed: 02/27/17					
Total Dissolved Solids	20	25	10	mg/L		22			10	10	J

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March 02, 2017

Report No.: AAB0838

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020835 - EPA 300.0											
Blank (7020835-BLK1)						Prepared & Analyzed: 02/28/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7020835-BS1)						Prepared & Analyzed: 02/28/17					
Chloride	9.78	0.25	0.01	mg/L	10.010		98	90-110			
Fluoride	10.1	0.30	0.004	mg/L	10.020		101	90-110			
Sulfate	9.95	1.0	0.09	mg/L	10.020		99	90-110			
Matrix Spike (7020835-MS1)			**Source: AAB0790-01**			Prepared & Analyzed: 02/28/17					
Chloride	11.3	0.25	0.01	mg/L	10.010	1.67	97	90-110			
Fluoride	9.89	0.30	0.004	mg/L	10.020	0.05	98	90-110			
Sulfate	11.1	1.0	0.09	mg/L	10.020	1.45	97	90-110			
Matrix Spike (7020835-MS2)			**Source: AAB0838-02**			Prepared & Analyzed: 02/28/17					
Chloride	15.3	0.25	0.01	mg/L	10.010	5.64	97	90-110			
Fluoride	10.5	0.30	0.004	mg/L	10.020	0.20	103	90-110			
Sulfate	182	1.0	0.09	mg/L	10.020	191	NR	90-110			QM-02
Matrix Spike Dup (7020835-MSD1)			**Source: AAB0790-01**			Prepared & Analyzed: 02/28/17					
Chloride	11.4	0.25	0.01	mg/L	10.010	1.67	97	90-110	0.2	15	
Fluoride	9.94	0.30	0.004	mg/L	10.020	0.05	99	90-110	0.4	15	
Sulfate	11.2	1.0	0.09	mg/L	10.020	1.45	97	90-110	0.3	15	

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Report No.: AAB0838

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020714 - EPA 7470A											
Blank (7020714-BLK1)						Prepared & Analyzed: 02/24/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7020714-BS1)						Prepared & Analyzed: 02/24/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
Matrix Spike (7020714-MS1)		**Source: AAB0789-10**				Prepared & Analyzed: 02/24/17					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (7020714-MSD1)		**Source: AAB0789-10**				Prepared & Analyzed: 02/24/17					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	2	20	
Post Spike (7020714-PS1)		**Source: AAB0789-10**				Prepared & Analyzed: 02/24/17					
Mercury	1.67			ug/L	1.6667	-0.0218	100	80-120			
Batch 7020761 - EPA 3005A											
Blank (7020761-BLK1)						Prepared: 02/27/17 Analyzed: 02/28/17					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020761 - EPA 3005A											
LCS (7020761-BS1)						Prepared: 02/27/17 Analyzed: 02/28/17					
Antimony	0.115	0.0030	0.0008	mg/L	0.10000		115	80-120			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000		103	80-120			
Barium	0.107	0.0100	0.0004	mg/L	0.10000		107	80-120			
Beryllium	0.109	0.0030	0.00008	mg/L	0.10000		109	80-120			
Boron	1.08	0.0400	0.0064	mg/L	1.0000		108	80-120			
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000		102	80-120			
Calcium	1.03	0.500	0.0311	mg/L	1.0000		103	80-120			
Chromium	0.108	0.0100	0.0009	mg/L	0.10000		108	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.0994	0.0250	0.0005	mg/L	0.10000		99	80-120			
Lead	0.104	0.0050	0.0001	mg/L	0.10000		104	80-120			
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000		107	80-120			
Nickel	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.104	0.0100	0.0010	mg/L	0.10000		104	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.106	0.0010	0.0002	mg/L	0.10000		106	80-120			
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000		102	80-120			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000		101	80-120			
Lithium	0.105	0.0500	0.0021	mg/L	0.10000		105	80-120			
Matrix Spike (7020761-MS1)		**Source: AAB0794-01**				Prepared: 02/27/17 Analyzed: 02/28/17					
Antimony	0.121	0.0030	0.0008	mg/L	0.10000	0.0018	119	75-125			
Arsenic	0.106	0.0050	0.0016	mg/L	0.10000	0.0019	104	75-125			
Barium	0.135	0.0100	0.0004	mg/L	0.10000	0.0273	108	75-125			
Beryllium	0.107	0.0030	0.00008	mg/L	0.10000	ND	107	75-125			
Boron	1.10	0.0400	0.0064	mg/L	1.0000	0.0220	108	75-125			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125			
Calcium	55.2	25.0	1.55	mg/L	1.0000	54.7	56	75-125			QM-02
Chromium	0.109	0.0100	0.0009	mg/L	0.10000	ND	109	75-125			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125			
Lead	0.103	0.0050	0.0001	mg/L	0.10000	0.0002	103	75-125			
Molybdenum	0.125	0.0100	0.0017	mg/L	0.10000	0.0095	116	75-125			
Nickel	0.107	0.0100	0.0006	mg/L	0.10000	ND	107	75-125			
Selenium	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125			
Silver	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0027	104	75-125			
Lithium	0.105	0.0500	0.0021	mg/L	0.10000	ND	105	75-125			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Report No.: AAB0838

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020761 - EPA 3005A											
Matrix Spike Dup (7020761-MSD1)		**Source: AAB0794-01**			Prepared: 02/27/17 Analyzed: 02/28/17						
Antimony	0.119	0.0030	0.0008	mg/L	0.10000	0.0018	117	75-125	1	20	
Arsenic	0.107	0.0050	0.0016	mg/L	0.10000	0.0019	105	75-125	0.6	20	
Barium	0.133	0.0100	0.0004	mg/L	0.10000	0.0273	105	75-125	2	20	
Beryllium	0.111	0.0030	0.00008	mg/L	0.10000	ND	111	75-125	4	20	
Boron	1.10	0.0400	0.0064	mg/L	1.0000	0.0220	107	75-125	0.4	20	
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000	ND	105	75-125	1	20	
Calcium	54.0	25.0	1.55	mg/L	1.0000	54.7	NR	75-125	2	20	QM-02
Chromium	0.111	0.0100	0.0009	mg/L	0.10000	ND	111	75-125	2	20	
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125	0.5	20	
Copper	0.0974	0.0250	0.0005	mg/L	0.10000	ND	97	75-125	5	20	
Lead	0.102	0.0050	0.0001	mg/L	0.10000	0.0002	102	75-125	1	20	
Molybdenum	0.122	0.0100	0.0017	mg/L	0.10000	0.0095	112	75-125	3	20	
Nickel	0.0991	0.0100	0.0006	mg/L	0.10000	ND	99	75-125	8	20	
Selenium	0.109	0.0100	0.0010	mg/L	0.10000	ND	109	75-125	4	20	
Silver	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125	0.6	20	
Thallium	0.105	0.0010	0.0002	mg/L	0.10000	ND	105	75-125	0.1	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	2	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0027	102	75-125	2	20	
Lithium	0.107	0.0500	0.0021	mg/L	0.10000	ND	107	75-125	2	20	
Post Spike (7020761-PS1)		**Source: AAB0794-01**			Prepared: 02/27/17 Analyzed: 02/28/17						
Antimony	108			ug/L	100.00	1.82	107	80-120			
Arsenic	108			ug/L	100.00	1.86	106	80-120			
Barium	133			ug/L	100.00	27.3	105	80-120			
Beryllium	105			ug/L	100.00	0.0112	105	80-120			
Boron	1080			ug/L	1000.0	22.0	105	80-120			
Cadmium	101			ug/L	100.00	0.0069	101	80-120			
Calcium	54500			ug/L	1000.0	54700	NR	80-120			QM-02
Chromium	110			ug/L	100.00	0.463	109	80-120			
Cobalt	101			ug/L	100.00	0.475	100	80-120			
Copper	101			ug/L	100.00	0.306	100	80-120			
Lead	101			ug/L	100.00	0.198	101	80-120			
Molybdenum	122			ug/L	100.00	9.54	112	80-120			
Nickel	104			ug/L	100.00	0.412	103	80-120			
Selenium	108			ug/L	100.00	0.751	107	80-120			
Silver	102			ug/L	100.00	0.0035	102	80-120			
Thallium	102			ug/L	100.00	0.0333	102	80-120			
Vanadium	110			ug/L	100.00	0.688	110	80-120			
Zinc	105			ug/L	100.00	2.66	102	80-120			
Lithium	102			ug/L	100.00	0.0698	102	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 02, 2017

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com
Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Doju Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: labwrk@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: State CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Ag, III + IIIC (EPA 6020/7470)	Cl, F, SO4, and TDS (EPA 300.0 and SM2540C)	Radium-226 and 228 (GY-8446 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:							P	P	P							
PRESERVATION:							3	7	3							
2-22-17	0957	GW		X	BRGWC-29I	4	1	1	2							1
2-22-17	1420	GW		X	BRGWC-30I	4	1	1	2							2
2-22-17	1110	GW		X	BRGWC-32S	4	1	1	2							3
2-22-17	1233	GW		X	BRGWC-33S	4	1	1	2							4
2-22-17	1428	GW		X	BRGWC-34S	4	1	1	2							5
2-22-17	1550	GW		X	BRGWC-17S	4	1	1	2							6
2-22-17	1556	GW		X	BRGWC-35S	4	1	1	2							7
2-22-17	1418	W			RB-2	4	1	1	2							8
2-22-17	1544	W			FB-2	4	1	1	2							9
2-22-17	—	GW			Dup-2	4	1	1	2							10

ANALYSIS REQUESTED

CONTAINER TYPE	CONTAINER PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Ballard, Geologist | DATE/TIME: 2-22-17 / 1710 | RELINQUISHED BY: [signature] | DATE/TIME: 2-23-17 / 0940

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

FOR LAB USE ONLY
LAB #: AA80838
Entered into LIMS: MR

RECEIVED BY LAB: [signature] | DATE/TIME: 02/23/17 1530

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Tracking #:

Packed: No NA | Ice: Yes No NA | Temperature: 1°C Min: 1°C Max: | Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

PACE ANALYTICAL SERVICES, LLC.

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LOG-IN CHECKLIST **Printed: 2/24/2017 12:03:40PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 02/23/17 15:30

Work Order: AAB0838
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10 **#Containers:** 40

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

March 17, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 30211808

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on February 24, 2017. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 30211808

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 30211808

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30211808001	**BRGWC-29I**	Water	02/22/17 09:57	02/24/17 12:25
30211808002	**BRGWC-30I**	Water	02/22/17 14:20	02/24/17 12:25
30211808003	**BRGWC-32S**	Water	02/22/17 11:10	02/24/17 12:25
30211808004	**BRGWC-33S**	Water	02/22/17 12:33	02/24/17 12:25
30211808005	**BRGWC-34S**	Water	02/22/17 14:28	02/24/17 12:25
30211808006	**BRGWC-17S**	Water	02/22/17 15:50	02/24/17 12:25
30211808007	**BRGWC-35S**	Water	02/22/17 15:56	02/24/17 12:25
30211808008	**RB-2**	Water	02/22/17 14:18	02/24/17 12:25
30211808009	**FB-2**	Water	02/22/17 15:44	02/24/17 12:25
30211808010	**Dup-2**	Water	02/22/17 00:00	02/24/17 12:25

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 30211808

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30211808001	**BRGWC-29I**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808002	**BRGWC-30I**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808003	**BRGWC-32S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808004	**BRGWC-33S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808005	**BRGWC-34S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808006	**BRGWC-17S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808007	**BRGWC-35S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808008	**RB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808009	**FB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30211808010	**Dup-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30211808

Sample: BRGWC-29I **Lab ID: 30211808001** Collected: 02/22/17 09:57 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.388 ± 0.176 (0.205) C:98% T:NA**	pCi/L	03/09/17 17:05	13982-63-3	
Radium-228	EPA 9320	**1.25 ± 0.592 (1.02) C:65% T:86%**	pCi/L	03/15/17 12:40	15262-20-1	
Total Radium	Total Radium Calculation	**1.64 ± 0.768 (1.23)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: BRGWC-30I **Lab ID: 30211808002** Collected: 02/22/17 14:20 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.225 ± 0.141 (0.211) C:95% T:NA**	pCi/L	03/09/17 17:05	13982-63-3	
Radium-228	EPA 9320	**0.345 ± 0.632 (1.38) C:61% T:76%**	pCi/L	03/15/17 19:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.570 ± 0.773 (1.59)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: BRGWC-32S **Lab ID: 30211808003** Collected: 02/22/17 11:10 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.120 ± 0.170 (0.362) C:91% T:NA**	pCi/L	03/09/17 17:05	13982-63-3	
Radium-228	EPA 9320	**0.952 ± 0.658 (1.24) C:57% T:81%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.828 (1.60)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: BRGWC-33S **Lab ID: 30211808004** Collected: 02/22/17 12:33 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.409 ± 0.187 (0.235) C:96% T:NA**	pCi/L	03/09/17 17:05	13982-63-3	
Radium-228	EPA 9320	**0.0725 ± 0.489 (1.14) C:64% T:80%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.482 ± 0.676 (1.38)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: BRGWC-34S **Lab ID: 30211808005** Collected: 02/22/17 14:28 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.484 ± 0.198 (0.212) C:93% T:NA**	pCi/L	03/09/17 17:05	13982-63-3	
Radium-228	EPA 9320	**0.530 ± 0.572 (1.18) C:59% T:89%**	pCi/L	03/15/17 19:59	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30211808

Sample: BRGWC-34S **Lab ID: 30211808005** Collected: 02/22/17 14:28 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.01 ± 0.770 (1.39)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: BRGWC-17S **Lab ID: 30211808006** Collected: 02/22/17 15:50 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0213 ± 0.107 (0.264) C:84% T:NA**	pCi/L	03/09/17 17:05	13982-63-3	
Radium-228	EPA 9320	**-0.425 ± 0.511 (1.30) C:64% T:82%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.0213 ± 0.618 (1.56)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: BRGWC-35S **Lab ID: 30211808007** Collected: 02/22/17 15:56 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.271 ± 0.189 (0.274) C:94% T:NA**	pCi/L	03/10/17 10:12	13982-63-3	
Radium-228	EPA 9320	**0.0221 ± 0.485 (1.14) C:64% T:83%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.293 ± 0.674 (1.41)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: RB-2 **Lab ID: 30211808008** Collected: 02/22/17 14:18 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0620 ± 0.118 (0.271) C:95% T:NA**	pCi/L	03/10/17 10:12	13982-63-3	
Radium-228	EPA 9320	**0.503 ± 0.587 (1.22) C:60% T:75%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.565 ± 0.705 (1.49)**	pCi/L	03/16/17 12:23	7440-14-4	

Sample: FB-2 **Lab ID: 30211808009** Collected: 02/22/17 15:44 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0285 ± 0.0735 (0.272) C:91% T:NA**	pCi/L	03/10/17 10:12	13982-63-3	
Radium-228	EPA 9320	**0.461 ± 0.497 (1.03) C:72% T:80%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.461 ± 0.571 (1.30)**	pCi/L	03/16/17 12:23	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30211808

Sample: Dup-2 **Lab ID: 30211808010** Collected: 02/22/17 00:00 Received: 02/24/17 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0182 ± 0.110 (0.340) C:84% T:NA**	pCi/L	03/10/17 10:12	13982-63-3	
Radium-228	EPA 9320	**1.17 ± 0.669 (1.21) C:65% T:85%**	pCi/L	03/15/17 19:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.17 ± 0.779 (1.55)**	pCi/L	03/16/17 12:23	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30211808

QC Batch: 251402 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30211808001, 30211808002, 30211808003, 30211808004, 30211808005, 30211808006, 30211808007, 30211808008, 30211808009, 30211808010

METHOD BLANK: 1236939 Matrix: Water
Associated Lab Samples: 30211808001, 30211808002, 30211808003, 30211808004, 30211808005, 30211808006, 30211808007, 30211808008, 30211808009, 30211808010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0711 ± 0.137 (0.311) C:100% T:NA	pCi/L	03/09/17 08:55	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 30211808

QC Batch: 251823 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30211808001, 30211808002, 30211808003, 30211808004, 30211808005, 30211808006, 30211808007, 30211808008, 30211808009, 30211808010

METHOD BLANK: 1238953 Matrix: Water
Associated Lab Samples: 30211808001, 30211808002, 30211808003, 30211808004, 30211808005, 30211808006, 30211808007, 30211808008, 30211808009, 30211808010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.459 ± 0.401 (0.808) C:64% T:86%	pCi/L	03/15/17 12:12	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant Branch
Pace Project No.: 30211808

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.

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAB0838 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 2/20/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

WO#:30211808

30211808

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	BRGWC-29I	G	2/22/2017 9:57	AAB0838-01	GW	2	X	001
2	BRGWC-30I	G	2/22/2017 14:20	AAB0838-02	GW	2	X	002
3	BRGWC-32S	G	2/22/2017 11:10	AAB0838-03	GW	2	X	003
4	BRGWC-33S	G	2/22/2017 12:33	AAB0838-04	GW	2	X	004
5	BRGWC-34S	G	2/22/2017 14:28	AAB0838-05	GW	2	X	005
6	BRGWC-17S	G	2/22/2017 15:50	AAB0838-06	GW	2	X	006
7	BRGWC-35S	G	2/22/2017 15:56	AAB0838-07	GW	2	X	007
8	RB-2	G	2/22/2017 14:18	AAB0838-08	W	2	X	008
9	FB-2	G	2/22/2017 15:44	AAB0838-09	W	2	X	009
10	Dup-2	G	2/22/2017 0:00	AAB0838-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Hill	2/24/17 1225	
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30211808

6998

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10455
Atlanta, GA 30308
P: 404-506-7239

REPORT TO: Josh Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE:
PO #: labwork@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: State CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Ag, III + III (EPA 6020/7470)	Cl, F, SO4, and TDS (EPA 300.0 and SM2540C)	Radium-226 and 228 (GL-846 9315/9320)	LAB ID NUMBER
							P	P	P	
							3	1	2	
2-22-17	0957	GW		X	BRGWC-29I	4	1	1	2	1
2-22-17	1420	GW		X	BRGWC-30I	4	1	1	2	2
2-22-17	1110	GW		X	BRGWC-32S	4	1	1	2	3
2-22-17	1233	GW		X	BRGWC-33S	4	1	1	2	4
2-22-17	1428	GW		X	BRGWC-34S	4	1	1	2	5
2-22-17	1550	GW		X	BRGWC-17S	4	1	1	2	6
2-22-17	1556	GW		X	BRGWC-35S	4	1	1	2	7
2-22-17	1418	W			RB-2	4	1	1	2	8
2-22-17	1514	W			FB-2	4	1	1	2	9
2-22-17	—	GW			Dup-2	4	1	1	2	10

ANALYSIS REQUESTED

CONTAINER TYPE	CONTAINER TYPE
P - PLASTIC	A - AMBER GLASS
G - CLEAR GLASS	V - VOA VIAL
S - STERILE	O - OTHER

PRESERVATION	PRESERVATION
1 - HCl, ≤6°C	2 - H_2SO_4, ≤6°C
3 - HNO_3	4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C	6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen	

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Ballard, Geologist
DATE/TIME: 2-22-17 / 1710

RELINQUISHED BY: [signature]
DATE/TIME: 2-23-17 / 0940

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: [signature]
DATE/TIME: 02/23/17 1530

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAB0838
Entered into LIMS: MR

Tracking #:

COC Revised 2016-05-17.xlsx

KH

Sample Condition Upon Receipt Pittsburgh

30211808

Pace Analytical

Client Name: Pace Atlanta Project #

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 0812 5102 5695

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 2/24/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation.	✓			15. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH / Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH / Date: 2/24/17

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	3/13/2017
Worklist:	34510
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1238953
MB concentration:	0.459
M/B Counting Uncertainty:	0.393
MB MDC:	0.808
MB Numerical Performance Indicator:	2.29
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS34510	LCSD34510
Count Date:	3/15/2017	3/15/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	25.034	25.034
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.813	0.809
Target Conc. (pCi/L, g, F):	6.158	6.191
Uncertainty (Calculated):	0.443	0.446
Result (pCi/L, g, F):	5.061	7.125
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.628	0.720
Numerical Performance Indicator:	-2.80	2.16
Percent Recovery:	82.20%	115.08%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS34510	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD34510	
Sample Result (pCi/L, g, F):	5.061	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.628	
Sample Duplicate Result (pCi/L, g, F):	7.125	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.720	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-4.235	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	33.33%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

3/17/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	3/9/2017
Worklist:	34416
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1236939
MB concentration:	0.071
M/B Counting Uncertainty:	0.137
MB MDC:	0.311
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
	LCS34416	LCSD34416
Count Date:	3/10/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.231	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.507	
Target Conc. (pCi/L, g, F):	18.837	
Uncertainty (Calculated):	0.886	
Result (pCi/L, g, F):	15.438	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.167	
Numerical Performance Indicator:	-4.55	
Percent Recovery:	81.95%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30211537006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30211537006DUP	
Sample Result (pCi/L, g, F):	0.608	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.272	
Sample Duplicate Result (pCi/L, g, F):	0.852	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.330	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.117	30211537006
Duplicate RPD:	33.36%	30211537006DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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.

3/17/17

LABORATORY ANALYTICAL DATA

June 2017

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AAF0543
June 22, 2017
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-2S	AAF0543-01	Ground Water	06/13/17 09:33	06/14/17 14:05
BRGWA-12S	AAF0543-02	Ground Water	06/13/17 10:07	06/14/17 14:05
BRGWA-23S	AAF0543-03	Ground Water	06/13/17 11:09	06/14/17 14:05
BRGWC-25I	AAF0543-04	Ground Water	06/13/17 13:42	06/14/17 14:05
PZ-42S	AAF0543-05	Ground Water	06/13/17 13:50	06/14/17 14:05
FB-1	AAF0543-06	Water	06/13/17 14:00	06/14/17 14:05
BRGWC-24S	AAF0543-07	Ground Water	06/13/17 15:01	06/14/17 14:05
BRGWC-27I	AAF0543-08	Ground Water	06/13/17 15:19	06/14/17 14:05
Dup-1	AAF0543-09	Ground Water	06/13/17 00:00	06/14/17 14:05
RB-1	AAF0543-10	Water	06/14/17 09:15	06/14/17 14:05

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: BRGWA-2S
Date/Time Sampled: 6/13/2017 9:33:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-01
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	53	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	1.7	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/16/17 13:46	7060443	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/16/17 13:46	7060443	RLC
Sulfate	0.67	1.0	0.09	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/16/17 13:46	7060443	RLC
Metals, Total											
Antimony	0.0011	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Barium	0.0094	0.0100	0.0004	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Calcium	3.84	0.500	0.0404	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Chromium	0.0038	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Cobalt	0.0025	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:33	7060458	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	06/19/17 13:30	06/19/17 17:30	7060550	DDN

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(770) 734-4200 FAX (770) 734-4201

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: BRGWA-12S
Date/Time Sampled: 6/13/2017 10:07:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-02
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	84	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	3.3	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 18:30	7060443	RLC
Fluoride	0.008	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 18:30	7060443	RLC
Sulfate	1.1	1.0	0.09	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 18:30	7060443	RLC
Metals, Total											
Antimony	0.0009	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Barium	0.0543	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Calcium	4.98	0.500	0.0404	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Chromium	0.0019	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 17:58	7060458	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	06/19/17 13:30	06/19/17 17:33	7060550	DDN

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: BRGWA-23S
Date/Time Sampled: 6/13/2017 11:09:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-03
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	130	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	3.2	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 18:52	7060443	RLC
Fluoride	0.07	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 18:52	7060443	RLC
Sulfate	35	1.0	0.09	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 18:52	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Arsenic	0.0008	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Barium	0.0861	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Calcium	10.2	5.00	2.02	mg/L	EPA 6020B		50	06/15/17 11:35	06/16/17 18:16	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Cobalt	0.0036	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Lithium	0.0061	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:10	7060458	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	06/19/17 13:30	06/19/17 17:35	7060550	DDN

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: BRGWC-25I
Date/Time Sampled: 6/13/2017 1:42:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-04
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	474	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	7.5	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 19:13	7060443	RLC
Fluoride	0.19	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 19:13	7060443	RLC
Sulfate	290	10	0.92	mg/L	EPA 300.0		10	06/14/17 18:44	06/16/17 14:07	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Barium	0.0351	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Boron	1.77	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Calcium	62.0	25.0	2.02	mg/L	EPA 6020B		50	06/15/17 11:35	06/16/17 18:27	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Cobalt	0.0083	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:21	7060458	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	06/19/17 13:30	06/19/17 17:38	7060550	DDN

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: PZ-42S
Date/Time Sampled: 6/13/2017 1:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-05
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	145	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 19:34	7060443	RLC
Fluoride	0.19	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 19:34	7060443	RLC
Sulfate	13	1.0	0.09	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 19:34	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Barium	0.0133	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Boron	0.0201	0.0400	0.0060	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Calcium	14.7	5.00	2.02	mg/L	EPA 6020B		50	06/15/17 11:35	06/16/17 18:38	7060458	KLH
Chromium	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Molybdenum	0.0046	0.0100	0.0010	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:33	7060458	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	06/19/17 13:30	06/19/17 17:45	7060550	DDN

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Georgia Power
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Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: FB-1
Date/Time Sampled: 6/13/2017 2:00:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAF0543-06
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 19:56	7060443	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 19:56	7060443	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 19:56	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Lead	0.0007	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 18:44	7060458	KLH
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/19/17 13:30	06/19/17 17:47	7060550	DDN

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: BRGWC-24S
Date/Time Sampled: 6/13/2017 3:01:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-07
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	220	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	14	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 20:17	7060443	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 20:17	7060443	RLC
Sulfate	18	1.0	0.09	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 20:17	7060443	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Barium	0.0509	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Boron	0.0105	0.0400	0.0060	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Calcium	19.1	5.00	2.02	mg/L	EPA 6020B		50	06/15/17 11:35	06/16/17 19:13	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Cobalt	0.0021	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Lithium	0.0038	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:07	7060458	KLH
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/19/17 13:30	06/19/17 17:49	7060550	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: BRGWC-27I
Date/Time Sampled: 6/13/2017 3:19:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-08
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	354	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	4.7	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 22:03	7060443	RLC
Fluoride	0.19	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 22:03	7060443	RLC
Sulfate	230	10	0.92	mg/L	EPA 300.0		10	06/14/17 18:44	06/16/17 14:27	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Barium	0.0143	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Boron	1.62	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Calcium	61.0	25.0	2.02	mg/L	EPA 6020B		50	06/15/17 11:35	06/16/17 19:25	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Cobalt	0.0094	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Selenium	0.0036	0.0100	0.0018	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Lithium	0.0017	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:19	7060458	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/19/17 13:30	06/19/17 17:52	7060550	DDN

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: Dup-1
Date/Time Sampled: 6/13/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0543-09
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	266	25	10	mg/L	SM 2540 C		1	06/19/17 12:55	06/19/17 12:55	7060547	JPT
Inorganic Anions											
Chloride	15	0.25	0.01	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 22:24	7060443	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 22:24	7060443	RLC
Sulfate	18	1.0	0.09	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 22:24	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Barium	0.0516	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Boron	0.0103	0.0400	0.0060	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Calcium	19.2	25.0	2.02	mg/L	EPA 6020B	J	50	06/15/17 11:35	06/16/17 19:36	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Cobalt	0.0020	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Lithium	0.0036	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:30	7060458	KLH
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/19/17 13:30	06/19/17 17:54	7060550	DDN

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(770) 734-4200 FAX (770) 734-4201

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543
Client ID: RB-1
Date/Time Sampled: 6/14/2017 9:15:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAF0543-10
Date/Time Received: 6/14/2017 2:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.01	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 22:45	7060443	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	06/14/17 18:44	06/15/17 22:45	7060443	RLC
Sulfate	0.09	1.0	0.09	mg/L	EPA 300.0	J	1	06/14/17 18:44	06/15/17 22:45	7060443	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Lead	0.0007	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/15/17 11:35	06/16/17 19:42	7060458	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	06/19/17 13:30	06/19/17 17:57	7060550	DDN

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June 22, 2017

Report No.: AAF0543

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060547 - SM 2540 C											
Blank (7060547-BLK1)						Prepared & Analyzed: 06/19/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7060547-BS1)						Prepared & Analyzed: 06/19/17					
Total Dissolved Solids	412	25	10	mg/L	400.00		103	84-108			
Duplicate (7060547-DUP1)		**Source: AAF0543-04**				Prepared & Analyzed: 06/19/17					
Total Dissolved Solids	500	25	10	mg/L		474			5	10	
Batch 7060584 - SM 2540 C											
Blank (7060584-BLK1)						Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7060584-BS1)						Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	394	25	10	mg/L	400.00		98	84-108			
Duplicate (7060584-DUP1)		**Source: AAF0595-07**				Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7060584-DUP2)		**Source: AAF0652-12**				Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	105	25	10	mg/L		97			8	10	

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Report No.: AAF0543

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060443 - EPA 300.0											
Blank (7060443-BLK1)						Prepared: 06/14/17 Analyzed: 06/15/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7060443-BS1)						Prepared: 06/14/17 Analyzed: 06/15/17					
Chloride	9.95	0.25	0.01	mg/L	10.020		99	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020		102	90-110			
Sulfate	10.0	1.0	0.09	mg/L	10.050		100	90-110			
Matrix Spike (7060443-MS1)			**Source: AAF0435-06**			Prepared: 06/14/17 Analyzed: 06/15/17					
Chloride	11.2	0.25	0.01	mg/L	10.020	1.38	98	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020	ND	102	90-110			
Sulfate	10.6	1.0	0.09	mg/L	10.050	0.68	98	90-110			
Matrix Spike (7060443-MS2)			**Source: AAF0486-04**			Prepared: 06/14/17 Analyzed: 06/16/17					
Chloride	11.9	0.25	0.01	mg/L	10.020	2.11	98	90-110			
Fluoride	10.5	0.30	0.004	mg/L	10.020	0.16	103	90-110			
Sulfate	14.8	1.0	0.09	mg/L	10.050	5.04	97	90-110			
Matrix Spike Dup (7060443-MSD1)			**Source: AAF0435-06**			Prepared: 06/14/17 Analyzed: 06/15/17					
Chloride	11.2	0.25	0.01	mg/L	10.020	1.38	98	90-110	0.1	15	
Fluoride	10.2	0.30	0.004	mg/L	10.020	ND	102	90-110	0.4	15	
Sulfate	10.5	1.0	0.09	mg/L	10.050	0.68	98	90-110	0.7	15	

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Report No.: AAF0543

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060458 - EPA 3005A											
Blank (7060458-BLK1)						Prepared: 06/15/17 Analyzed: 06/16/17					
Antimony	0.0008	0.0030	0.0006	mg/L							J
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	0.0014	0.0100	0.0012	mg/L							J
Lithium	ND	0.0500	0.0015	mg/L							
LCS (7060458-BS1)						Prepared: 06/15/17 Analyzed: 06/16/17					
Antimony	0.106	0.0030	0.0006	mg/L	0.10000		106	80-120			
Arsenic	0.0994	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.0976	0.0100	0.0004	mg/L	0.10000		98	80-120			
Beryllium	0.111	0.0030	0.00009	mg/L	0.10000		111	80-120			
Boron	1.11	0.0400	0.0060	mg/L	1.0000		111	80-120			
Cadmium	0.105	0.0010	0.0001	mg/L	0.10000		105	80-120			
Calcium	0.996	0.500	0.0404	mg/L	1.0000		100	80-120			
Chromium	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Cobalt	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Copper	0.107	0.0250	0.0003	mg/L	0.10000		107	80-120			
Lead	0.102	0.0050	0.00007	mg/L	0.10000		102	80-120			
Molybdenum	0.104	0.0100	0.0010	mg/L	0.10000		104	80-120			
Nickel	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Selenium	0.0983	0.0100	0.0018	mg/L	0.10000		98	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000		105	80-120			
Zinc	0.111	0.0100	0.0012	mg/L	0.10000		111	80-120			
Lithium	0.109	0.0500	0.0015	mg/L	0.10000		109	80-120			

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June 22, 2017

Report No.: AAF0543

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060458 - EPA 3005A											
Matrix Spike (7060458-MS1)		**Source: AAF0543-01**			Prepared: 06/15/17 Analyzed: 06/16/17						
Antimony	0.108	0.0030	0.0006	mg/L	0.10000	0.0011	107	75-125			
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000	ND	100	75-125			
Barium	0.109	0.0100	0.0004	mg/L	0.10000	0.0094	99	75-125			
Beryllium	0.109	0.0030	0.00009	mg/L	0.10000	ND	109	75-125			
Boron	1.08	0.0400	0.0060	mg/L	1.0000	ND	108	75-125			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125			
Calcium	4.84	0.500	0.0404	mg/L	1.0000	3.84	100	75-125			
Chromium	0.112	0.0100	0.0005	mg/L	0.10000	0.0038	108	75-125			
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000	0.0025	102	75-125			
Copper	0.105	0.0250	0.0003	mg/L	0.10000	ND	105	75-125			
Lead	0.102	0.0050	0.00007	mg/L	0.10000	ND	102	75-125			
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125			
Nickel	0.109	0.0100	0.0005	mg/L	0.10000	0.0045	105	75-125			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125			
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	ND	103	75-125			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000	ND	105	75-125			
Zinc	0.113	0.0100	0.0012	mg/L	0.10000	0.0035	110	75-125			
Lithium	0.109	0.0500	0.0015	mg/L	0.10000	ND	109	75-125			
Matrix Spike Dup (7060458-MSD1)		**Source: AAF0543-01**			Prepared: 06/15/17 Analyzed: 06/16/17						
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	0.0011	106	75-125	1	20	
Arsenic	0.0990	0.0050	0.0005	mg/L	0.10000	ND	99	75-125	1	20	
Barium	0.106	0.0100	0.0004	mg/L	0.10000	0.0094	96	75-125	3	20	
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000	ND	104	75-125	4	20	
Boron	1.06	0.0400	0.0060	mg/L	1.0000	ND	106	75-125	2	20	
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125	0.3	20	
Calcium	4.83	0.500	0.0404	mg/L	1.0000	3.84	99	75-125	0.3	20	
Chromium	0.109	0.0100	0.0005	mg/L	0.10000	0.0038	106	75-125	2	20	
Cobalt	0.107	0.0100	0.0003	mg/L	0.10000	0.0025	105	75-125	2	20	
Copper	0.103	0.0250	0.0003	mg/L	0.10000	ND	103	75-125	2	20	
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125	0.8	20	
Molybdenum	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125	3	20	
Nickel	0.111	0.0100	0.0005	mg/L	0.10000	0.0045	106	75-125	1	20	
Selenium	0.104	0.0100	0.0018	mg/L	0.10000	ND	104	75-125	2	20	
Silver	0.0992	0.0100	0.0002	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	ND	102	75-125	1	20	
Vanadium	0.106	0.0100	0.0012	mg/L	0.10000	ND	106	75-125	1	20	
Zinc	0.109	0.0100	0.0012	mg/L	0.10000	0.0035	106	75-125	3	20	
Lithium	0.105	0.0500	0.0015	mg/L	0.10000	ND	105	75-125	4	20	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060458 - EPA 3005A											
Post Spike (7060458-PS1)			**Source: AAF0543-01**			Prepared: 06/15/17 Analyzed: 06/16/17					
Antimony	97.3			ug/L	100.00	1.13	96	80-120			
Arsenic	101			ug/L	100.00	-0.0040	101	80-120			
Barium	106			ug/L	100.00	9.42	96	80-120			
Beryllium	104			ug/L	100.00	0.0052	104	80-120			
Boron	1030			ug/L	1000.0	2.31	103	80-120			
Cadmium	104			ug/L	100.00	-0.0264	104	80-120			
Calcium	4960			ug/L	1000.0	3840	113	80-120			
Chromium	113			ug/L	100.00	3.81	109	80-120			
Cobalt	107			ug/L	100.00	2.55	104	80-120			
Copper	101			ug/L	100.00	0.120	101	80-120			
Lead	100			ug/L	100.00	0.0232	100	80-120			
Molybdenum	99.7			ug/L	100.00	0.0532	100	80-120			
Nickel	109			ug/L	100.00	4.51	104	80-120			
Selenium	101			ug/L	100.00	-0.138	101	80-120			
Silver	99.1			ug/L	100.00	-0.0007	99	80-120			
Thallium	100			ug/L	100.00	0.0265	100	80-120			
Vanadium	108			ug/L	100.00	0.316	108	80-120			
Zinc	113			ug/L	100.00	3.48	110	80-120			
Lithium	104			ug/L	100.00	0.744	103	80-120			
Batch 7060550 - EPA 7470A											
Blank (7060550-BLK1)						Prepared & Analyzed: 06/19/17					
Mercury	0.00004	0.00050	0.000041	mg/L							B-01, J
LCS (7060550-BS1)						Prepared & Analyzed: 06/19/17					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0543

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060550 - EPA 7470A											
Matrix Spike (7060550-MS1)		**Source: AAF0435-01**				Prepared & Analyzed: 06/19/17					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3	0.00005	97	75-125			
Matrix Spike Dup (7060550-MSD1)		**Source: AAF0435-01**				Prepared & Analyzed: 06/19/17					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	0.00005	96	75-125	1	20	
Post Spike (7060550-PS1)		**Source: AAF0435-01**				Prepared & Analyzed: 06/19/17					
Mercury	1.77			ug/L	1.6667	0.0301	104	80-120			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE 30185
Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE: —
PO #: laburcheSouthernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		metals APP 3&4 (EPA 6020/7470)	TDS, Cl, F, SO_4 (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
6-13-17	0933	GW		X	BRGWA-25	4		1	1	2						1	
6-13-17	1007	GW		X	BRGWA-12S	4		1	1	2						2	
6-13-17	1109	GW		X	BRGWA-23S	4		1	1	2						3	
~~6-13-17~~	~~1118~~	~~GW~~		~~X~~	~~BRGWA-23I~~ (TM, 6-13-17) BRGWA-12I	4		1	1	2	(TM 6-14-17)						
6-13-17	1342	GW		X	BRGWL-25I	4		1	1	2						4	
6-13-17	1350	GW		X	P2-42S	4		1	1	2						5	
6-13-17	1400	W		X	FB-1	4		1	1	2						6	
6-13-17	1501	GW		X	BRGWL-24S	4		1	1	2						7	
6-13-17	1519	GW		X	BRGWL-27I	6		1	1	4						8	extra Radium (x2)
6-13-17	—	GW		X	DUP-1	4		1	1	2						9	
6-14-17	0915	W		X	RB-1	4		1	1	2						10	

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

SAMPLED BY AND TITLE: Travis Martinez, Scientist
DATE/TIME: 6-13-17 1700
RELINQUISHED BY:
DATE/TIME: 6-14-17 1115

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Rachman
DATE/TIME: 06/14/17 1405

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Custody Seal: Intact Broken Not Present N/A
# of Coolers:
Cooler ID:

Temperature: 2 Min: 2 Max:

Received on Ice: Yes No NA
Custody Seals Intact: Yes No NA

FOR LAB USE ONLY
LAB #: AAF0543
Entered into LIMS: mp
Tracking #:

Rev. 12/15/2016

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 6/15/2017 9:13:43AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 06/14/17 14:05

Work Order: AAF0543
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10 **#Containers:** 42

Minimum Temp(C): 2.1 **Maximum Temp(C):** 2.1 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 07, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on June 15, 2017. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30221632001	**BRGWA-2S**	Water	06/13/17 09:33	06/15/17 11:20
30221632002	**BRGWA-12S**	Water	06/13/17 10:07	06/15/17 11:20
30221632003	**BRGWA-23S**	Water	06/13/17 11:09	06/15/17 11:20
30221632004	**BRGWC-25I**	Water	06/13/17 13:42	06/15/17 11:20
30221632005	**PZ-42S**	Water	06/13/17 13:50	06/15/17 11:20
30221632006	**FB-1**	Water	06/13/17 14:00	06/15/17 11:20
30221632007	**BRGWC-24S**	Water	06/13/17 15:01	06/15/17 11:20
30221632008	**BRGWC-27I**	Water	06/13/17 15:19	06/15/17 11:20
30221632009	**Dup-1**	Water	06/13/17 00:00	06/15/17 11:20
30221632010	**RB-1**	Water	06/14/17 09:15	06/15/17 11:20

Pace Analytical Services, LLC
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Greensburg, PA 15601
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SAMPLE ANALYTE COUNT

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30221632001	**BRGWA-2S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632002	**BRGWA-12S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632003	**BRGWA-23S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632004	**BRGWC-25I**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632005	**PZ-42S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632006	**FB-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632007	**BRGWC-24S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632008	**BRGWC-27I**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632009	**Dup-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30221632010	**RB-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Sample: BRGWA-2S **Lab ID: 30221632001** Collected: 06/13/17 09:33 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.155 ± 0.209 (0.441) C:76% T:NA**	pCi/L	07/07/17 08:34	13982-63-3	
Radium-228	EPA 9320	**0.490 ± 0.351 (0.670) C:73% T:83%**	pCi/L	06/27/17 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.645 ± 0.560 (1.11)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: BRGWA-12S **Lab ID: 30221632002** Collected: 06/13/17 10:07 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.226 ± 0.180 (0.737) C:48% T:NA**	pCi/L	07/07/17 08:34	13982-63-3	
Radium-228	EPA 9320	**0.163 ± 0.334 (0.738) C:73% T:86%**	pCi/L	06/27/17 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.163 ± 0.514 (1.48)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: BRGWA-23S **Lab ID: 30221632003** Collected: 06/13/17 11:09 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0452 ± 0.182 (0.530) C:77% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.618 ± 0.352 (0.634) C:73% T:92%**	pCi/L	06/27/17 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.618 ± 0.534 (1.16)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: BRGWC-25I **Lab ID: 30221632004** Collected: 06/13/17 13:42 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.215 ± 0.227 (0.434) C:69% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.523 ± 0.316 (0.569) C:73% T:90%**	pCi/L	06/27/17 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.738 ± 0.543 (1.00)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: PZ-42S **Lab ID: 30221632005** Collected: 06/13/17 13:50 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0466 ± 0.213 (0.532) C:87% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.397 ± 0.321 (0.631) C:75% T:85%**	pCi/L	06/27/17 14:52	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Sample: PZ-42S **Lab ID: 30221632005** Collected: 06/13/17 13:50 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.444 ± 0.534 (1.16)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: FB-1 **Lab ID: 30221632006** Collected: 06/13/17 14:00 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0551 ± 0.146 (0.466) C:75% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.154 ± 0.302 (0.665) C:73% T:88%**	pCi/L	06/27/17 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.154 ± 0.448 (1.13)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: BRGWC-24S **Lab ID: 30221632007** Collected: 06/13/17 15:01 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.176 ± 0.203 (0.408) C:87% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.112 ± 0.282 (0.630) C:80% T:87%**	pCi/L	06/27/17 11:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.288 ± 0.485 (1.04)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: BRGWC-27I **Lab ID: 30221632008** Collected: 06/13/17 15:19 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0742 ± 0.143 (0.329) C:95% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.447 ± 0.306 (0.582) C:80% T:89%**	pCi/L	06/27/17 11:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.521 ± 0.449 (0.911)**	pCi/L	07/07/17 11:15	7440-14-4	

Sample: Dup-1 **Lab ID: 30221632009** Collected: 06/13/17 00:00 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0644 ± 0.191 (0.467) C:89% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.104 ± 0.263 (0.591) C:77% T:80%**	pCi/L	06/27/17 11:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.168 ± 0.454 (1.06)**	pCi/L	07/07/17 11:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

Sample: RB-1 **Lab ID: 30221632010** Collected: 06/14/17 09:15 Received: 06/15/17 11:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.126 ± 0.161 (0.338) C:88% T:NA**	pCi/L	06/29/17 08:18	13982-63-3	
Radium-228	EPA 9320	**1.28 ± 0.447 (0.613) C:77% T:84%**	pCi/L	06/30/17 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**1.41 ± 0.608 (0.951)**	pCi/L	07/07/17 09:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

QC Batch: 262650 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30221632001, 30221632002, 30221632003, 30221632004, 30221632005, 30221632006, 30221632007, 30221632008, 30221632009

METHOD BLANK: 1293445 Matrix: Water
Associated Lab Samples: 30221632001, 30221632002, 30221632003, 30221632004, 30221632005, 30221632006, 30221632007, 30221632008, 30221632009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0676 ± 0.127 (0.289) C:88% T:NA	pCi/L	07/07/17 08:26	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

QC Batch: 262720 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30221632010

METHOD BLANK: 1293766 Matrix: Water
Associated Lab Samples: 30221632010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0275 ± 0.105 (0.325) C:84% T:NA	pCi/L	06/29/17 08:18	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

QC Batch: 262718 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30221632010

METHOD BLANK: 1293764 Matrix: Water
Associated Lab Samples: 30221632010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.132 ± 0.385 (0.862) C:75% T:74%	pCi/L	06/30/17 16:03	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

QC Batch: 262273 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30221632001, 30221632002, 30221632003, 30221632004, 30221632005, 30221632006, 30221632007, 30221632008, 30221632009

METHOD BLANK: 1291833 Matrix: Water
Associated Lab Samples: 30221632001, 30221632002, 30221632003, 30221632004, 30221632005, 30221632006, 30221632007, 30221632008, 30221632009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.584 ± 0.353 (0.653) C:79% T:89%	pCi/L	06/27/17 11:02	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAF0543 Plant Branch
Pace Project No.: 30221632

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.

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAF0543 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 7/10/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

WO#:30221632

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	BRGWA-2S	G	6/13/2017 9:33	AAF0543-01	GW	2	X	001
2	BRGWA-12S	G	6/13/2017 10:07	AAF0543-02	GW	2	X	002
3	BRGWA-23S	G	6/13/2017 11:09	AAF0543-03	GW	2	X	003
4	BRGWC-25I	G	6/13/2017 13:42	AAF0543-04	GW	2	X	004
5	PZ-42S	G	6/13/2017 13:50	AAF0543-05	GW	2	X	005
6	FB-1	G	6/13/2017 14:00	AAF0543-06	W	2	X	006
7	BRGWC-24S	G	6/13/2017 15:01	AAF0543-07	GW	2	X	007
8	BRGWC-27I	G	6/13/2017 15:19	AAF0543-08	GW	4	X	008
9	Dup-1	G	6/13/2017 0:00	AAF0543-09	GW	2	X	009
10	RB-1	G	6/14/2017 9:15	AAF0543-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	6/14/17	Ashleyhaul/Pace	6-15-17/1120	
2					
3					

Cooler Temperature on Receipt NA °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Sample Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30221632

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE 310185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla

REQUESTED COMPLETION DATE: –

PO #: Jaburch@Southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App 3+4 (EPA 6020/7470) Container: P, Preservation: 3	TDS, Cl, F, SO4 (EPA 300.0 & SM 2540C) Container: P, Preservation: 7	Radium 226 & 228 (SW-846 9315/9320) Container: P, Preservation: 3							LAB I.D. NUMBER	REMARKS/ADDITIONAL INFORMATION
6-13-17	0933	GW		X	BRGWA-2S	4		1	1	2							1	
6-13-17	1007	GW		X	BRGWA-12S	4		1	1	2							2	
6-13-17	1109	GW		X	BRGWA-23S	4		1	1	2							3	
~~6-13-17~~	~~1118~~	~~GW~~		~~X~~	~~BRGWA-23S~~ TM 6-13-17 12S	~~4~~		~~1~~	~~1~~	~~2~~	(TM 6-14-17)							
6-13-17	1342	GW		X	BRGWC-25I	4		1	1	2							4	
6-13-17	1350	GW		X	PZ-42S	4		1	1	2							5	
6-13-17	1400	W		X	FB-1	4		1	1	2							6	
6-13-17	1501	GW		X	BRGWC-24S	4		1	1	2							7	
6-13-17	1519	GW		X	BRGWC-27I	6		1	1	4							8	extra radium (x2)
6-13-17	–	GW		X	DUP-1	4		1	1	2							9	
6-14-17	0915	W		X	RB-1	4		1	1	2							10	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: Travis Martinez, Scientist — DATE/TIME: 6-13-17 / 1700

RELINQUISHED BY: [signature] — DATE/TIME: 6-14-17 / 1115

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: M Lalman [signature] — DATE/TIME: 06/14/17 1405

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

pH checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: 2.1 Min: 2.1 Max

Custody Seal: (Intact) Broken Not Present N/A — # of Coolers: 1 — Cooler ID:

FOR LAB USE ONLY
LAB #: AAF0543
Entered into LIMS: [initials]
Tracking #:

Sample Condition Upon Receipt Pittsburgh

Face Analytical

30221632

Client Name: Pace, GA Project #

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 6812 5105 0148

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: DMR 6-15-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X X			10.
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	X X			15. pH<2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: DMR Date/time of preservation: Lot # of added preservative:
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: DMR Date: 6-15-17

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	6/27/2017
Worklist:	36334
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1293766
MB concentration:	-0.028
M/B Counting Uncertainty:	0.105
MB MDC:	0.325
MB Numerical Performance Indicator:	-0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36334	LCSD36334
Count Date:	6/29/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.200	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.508	
Target Conc. (pCi/L, g, F):	15.789	
Uncertainty (Calculated):	1.454	
Result (pCi/L, g, F):	12.340	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.015	
Numerical Performance Indicator:	-3.81	
Percent Recovery:	78.16%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30222149005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30222149005DUP	
Sample Result (pCi/L, g, F):	0.243	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.156	
Sample Duplicate Result (pCi/L, g, F):	0.296	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.178	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.439	30222149005
Duplicate RPD:	19.60%	30222149005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

6/27/2017

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	6/26/2017
Worklist:	36332
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1293764
MB concentration:	0.132
M/B Counting Uncertainty:	0.384
MB MDC:	0.862
MB Numerical Performance Indicator:	0.67
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36332	LCSD36332
Count Date:	6/30/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.164	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	6.043	
Uncertainty (Calculated):	0.435	
Result (pCi/L, g, F):	5.700	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.668	
Numerical Performance Indicator:	-0.84	
Percent Recovery:	94.32%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30222149005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30222149005DUP	
Sample Result (pCi/L, g, F):	0.527	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.363	
Sample Duplicate Result (pCi/L, g, F):	0.843	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.406	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.137	30222149005
Duplicate RPD:	46.14%	30222149005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	

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.

7/7/17

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	7/6/2017
Worklist:	36322
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1293445
MB concentration:	0.068
M/B Counting Uncertainty:	0.127
MB MDC:	0.289
MB Numerical Performance Indicator:	1.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36322	LCSD36322
Count Date:	7/7/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.199	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.503	
Target Conc. (pCi/L, g, F):	15.944	
Uncertainty (Calculated):	1.469	
Result (pCi/L, g, F):	13.290	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.240	
Numerical Performance Indicator:	-2.71	
Percent Recovery:	83.35%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30221512003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30221512003DUP	
Sample Result (pCi/L, g, F):	0.252	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.225	
Sample Duplicate Result (pCi/L, g, F):	0.223	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.207	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.184	30221512003
Duplicate RPD:	12.09%	30221512003DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

7/7/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	6/21/2017
Worklist:	36248
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1291833
MB concentration:	0.584
M/B Counting Uncertainty:	0.337
MB MDC:	0.653
MB Numerical Performance Indicator:	3.40
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36248	LCSD36248
Count Date:	6/27/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.189	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	5.975	
Uncertainty (Calculated):	0.430	
Result (pCi/L, g, F):	7.767	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.780	
Numerical Performance Indicator:	3.94	
Percent Recovery:	129.99%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30221632008	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30221632008DUP	
Sample Result (pCi/L, g, F):	0.447	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.296	
Sample Duplicate Result (pCi/L, g, F):	0.381	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.295	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.308	30221632008
Duplicate RPD:	15.86%	30221632008DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

7/7/17

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AAF0595
June 22, 2017
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-12I	AAF0595-01	Ground Water	06/14/17 09:59	06/15/17 15:00
PZ-40S	AAF0595-02	Ground Water	06/14/17 10:55	06/15/17 15:00
BRGWC-29I	AAF0595-03	Ground Water	06/14/17 11:39	06/15/17 15:00
PZ-41S	AAF0595-04	Ground Water	06/14/17 13:04	06/15/17 15:00
BRGWC-32S	AAF0595-05	Ground Water	06/14/17 13:05	06/15/17 15:00
BRGWC-33S	AAF0595-06	Ground Water	06/14/17 14:36	06/15/17 15:00
RB-2	AAF0595-07	Water	06/14/17 14:25	06/15/17 15:00
BRGWC-30I	AAF0595-08	Ground Water	06/14/17 14:54	06/15/17 15:00
BRGWC-34S	AAF0595-09	Ground Water	06/14/17 15:32	06/15/17 15:00
FB-2	AAF0595-10	Water	06/14/17 15:40	06/15/17 15:00
Dup-2	AAF0595-11	Ground Water	06/14/17 00:00	06/15/17 15:00

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: BRGWA-12I
Date/Time Sampled: 6/14/2017 9:59:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-01
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	140	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 14:48	7060500	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 14:48	7060500	RLC
Sulfate	2.6	1.0	0.09	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 14:48	7060500	RLC
Metals, Total											
Antimony	0.0014	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Barium	0.0726	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Boron	0.0078	0.0400	0.0060	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Calcium	18.1	5.00	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/16/17 21:36	7060482	KLH
Chromium	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Lithium	0.0054	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:30	7060482	KLH
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:25	7060593	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: PZ-40S
Date/Time Sampled: 6/14/2017 10:55:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-02
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	200	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	9.0	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 15:09	7060500	RLC
Fluoride	0.13	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 15:09	7060500	RLC
Sulfate	16	1.0	0.09	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 15:09	7060500	RLC
Metals, Total											
Antimony	0.0009	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Arsenic	0.0008	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Barium	0.0568	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Boron	0.0294	0.0400	0.0060	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Calcium	18.9	5.00	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/16/17 21:59	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Cobalt	0.0041	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Lithium	0.0028	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 21:53	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:28	7060593	DDN

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: BRGWC-29I
Date/Time Sampled: 6/14/2017 11:39:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-03
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	661	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 16:11	7060500	RLC
Fluoride	0.38	0.30	0.004	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 16:11	7060500	RLC
Sulfate	440	20	1.8	mg/L	EPA 300.0		20	06/16/17 10:10	06/21/17 12:35	7060500	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Arsenic	0.0020	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Barium	0.0157	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Beryllium	0.0012	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Boron	1.60	0.0400	0.0060	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Calcium	91.3	25.0	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/16/17 22:11	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Cobalt	0.0113	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Lead	0.0004	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Selenium	0.0074	0.0100	0.0018	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Lithium	0.0036	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:05	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 12:44	7060592	DDN

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: PZ-41S
Date/Time Sampled: 6/14/2017 1:04:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-04
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	272	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 16:31	7060500	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 16:31	7060500	RLC
Sulfate	99	5.0	0.46	mg/L	EPA 300.0		5	06/16/17 10:10	06/21/17 12:55	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Arsenic	0.0017	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Barium	0.0820	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Boron	0.496	0.0400	0.0060	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Calcium	23.1	5.00	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/16/17 22:22	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Cobalt	0.0130	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Lithium	0.0033	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:16	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 12:46	7060592	DDN

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: BRGWC-32S
Date/Time Sampled: 6/14/2017 1:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-05
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	635	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	7.1	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 18:15	7060500	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 18:15	7060500	RLC
Sulfate	400	20	1.8	mg/L	EPA 300.0		20	06/16/17 10:10	06/21/17 13:16	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Barium	0.0421	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Boron	1.57	0.0400	0.0060	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Calcium	60.2	25.0	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/16/17 22:33	7060482	KLH
Chromium	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:28	7060482	KLH
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 12:54	7060592	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: BRGWC-33S
Date/Time Sampled: 6/14/2017 2:36:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-06
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	316	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	4.5	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 18:35	7060500	RLC
Fluoride	0.18	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 18:35	7060500	RLC
Sulfate	200	10	0.92	mg/L	EPA 300.0		10	06/16/17 10:10	06/21/17 13:37	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Barium	0.0218	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Beryllium	0.0019	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Boron	1.16	0.0400	0.0060	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Calcium	47.1	25.0	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/16/17 22:45	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Cobalt	0.0557	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Selenium	0.0040	0.0100	0.0018	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Lithium	0.0097	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 22:39	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 12:56	7060592	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: RB-2
Date/Time Sampled: 6/14/2017 2:25:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAF0595-07
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 18:56	7060500	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 18:56	7060500	RLC
Sulfate	0.23	1.0	0.09	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 18:56	7060500	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:50	7060482	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:50	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:50	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:50	7060482	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:50	7060482	KLH
Lead	0.0005	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:02	7060482	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:50	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 12:58	7060592	DDN

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Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: BRGWC-30I
Date/Time Sampled: 6/14/2017 2:54:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-08
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	536	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 19:17	7060500	RLC
Fluoride	0.15	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 19:17	7060500	RLC
Sulfate	290	20	1.8	mg/L	EPA 300.0		20	06/16/17 10:10	06/21/17 13:57	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Barium	0.0197	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 14:13	7060482	KLH
Boron	1.71	0.400	0.0595	mg/L	EPA 6020B		10	06/16/17 07:30	06/21/17 14:08	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Calcium	63.5	25.0	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/21/17 14:02	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 14:02	7060482	KLH
Cobalt	0.0015	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Selenium	0.0045	0.0100	0.0018	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:08	7060482	KLH
Lithium	0.0101	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/21/17 14:13	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:01	7060592	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: BRGWC-34S
Date/Time Sampled: 6/14/2017 3:32:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-09
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	643	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 19:37	7060500	RLC
Fluoride	0.10	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 19:37	7060500	RLC
Sulfate	410	20	1.8	mg/L	EPA 300.0		20	06/16/17 10:10	06/21/17 14:18	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Barium	0.0341	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Beryllium	ND	0.0030	0.0005	mg/L	EPA 6020B		5	06/16/17 07:30	06/21/17 14:36	7060482	KLH
Boron	2.45	2.00	0.298	mg/L	EPA 6020B		50	06/16/17 07:30	06/21/17 14:30	7060482	KLH
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Calcium	98.0	25.0	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/21/17 14:30	7060482	KLH
Chromium	ND	0.0500	0.0023	mg/L	EPA 6020B	R-01	5	06/16/17 07:30	06/21/17 14:36	7060482	KLH
Cobalt	0.0036	0.0500	0.0013	mg/L	EPA 6020B	R-01, J	5	06/16/17 07:30	06/21/17 14:36	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:19	7060482	KLH
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	06/16/17 07:30	06/21/17 14:36	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:03	7060592	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: FB-2
Date/Time Sampled: 6/14/2017 3:40:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAF0595-10
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 20:19	7060500	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 20:19	7060500	RLC
Sulfate	0.20	1.0	0.09	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 20:19	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:56	7060482	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:56	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:56	7060482	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:56	7060482	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:56	7060482	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:31	7060482	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/16/17 07:30	06/21/17 13:56	7060482	KLH
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:30	7060593	DDN

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595
Client ID: Dup-2
Date/Time Sampled: 6/14/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0595-11
Date/Time Received: 6/15/2017 3:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	638	25	10	mg/L	SM 2540 C		1	06/20/17 18:05	06/20/17 18:05	7060584	JPT
Inorganic Anions											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	06/16/17 10:10	06/16/17 20:39	7060500	RLC
Fluoride	0.22	0.30	0.004	mg/L	EPA 300.0	J	1	06/16/17 10:10	06/16/17 20:39	7060500	RLC
Sulfate	440	20	1.8	mg/L	EPA 300.0		20	06/16/17 10:10	06/22/17 05:52	7060500	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:36	7060482	KLH
Arsenic	ND	0.0100	0.0026	mg/L	EPA 6020B	R-01	5	06/16/17 07:30	06/21/17 14:55	7060482	KLH
Barium	0.0153	0.0100	0.0004	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:36	7060482	KLH
Beryllium	0.0011	0.0030	0.0005	mg/L	EPA 6020B	J	5	06/16/17 07:30	06/21/17 14:55	7060482	KLH
Boron	1.69	0.400	0.0595	mg/L	EPA 6020B		10	06/16/17 07:30	06/21/17 14:49	7060482	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:36	7060482	KLH
Calcium	96.9	25.0	2.02	mg/L	EPA 6020B		50	06/16/17 07:30	06/21/17 14:44	7060482	KLH
Chromium	ND	0.0500	0.0023	mg/L	EPA 6020B	R-01	5	06/16/17 07:30	06/21/17 14:55	7060482	KLH
Cobalt	0.0104	0.0500	0.0013	mg/L	EPA 6020B	R-01, J	5	06/16/17 07:30	06/21/17 14:55	7060482	KLH
Lead	0.0005	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 23:36	7060482	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/16/17 07:30	06/16/17 23:36	7060482	KLH
Selenium	ND	0.0500	0.0088	mg/L	EPA 6020B	R-01	5	06/16/17 07:30	06/21/17 14:55	7060482	KLH
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	06/16/17 07:30	06/16/17 23:36	7060482	KLH
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	06/16/17 07:30	06/21/17 14:55	7060482	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:32	7060593	DDN

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 22, 2017

Report No.: AAF0595

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060584 - SM 2540 C											
Blank (7060584-BLK1)						Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7060584-BS1)						Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	394	25	10	mg/L	400.00		98	84-108			
Duplicate (7060584-DUP1)		**Source: AAF0595-07**				Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7060584-DUP2)		**Source: AAF0652-12**				Prepared & Analyzed: 06/20/17					
Total Dissolved Solids	105	25	10	mg/L		97			8	10	

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June 22, 2017

Report No.: AAF0595

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060500 - EPA 300.0											
Blank (7060500-BLK1)						Prepared & Analyzed: 06/16/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7060500-BS1)						Prepared & Analyzed: 06/16/17					
Chloride	9.85	0.25	0.01	mg/L	10.020		98	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020		101	90-110			
Sulfate	10.1	1.0	0.09	mg/L	10.050		100	90-110			
Matrix Spike (7060500-MS1)			**Source: AAF0595-02**			Prepared & Analyzed: 06/16/17					
Chloride	18.8	0.25	0.01	mg/L	10.020	9.02	97	90-110			
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.13	107	90-110			
Sulfate	25.0	1.0	0.09	mg/L	10.050	16.2	88	90-110			QM-02
Matrix Spike (7060500-MS2)			**Source: AAF0595-09**			Prepared & Analyzed: 06/16/17					
Chloride	17.9	0.25	0.01	mg/L	10.020	7.28	106	90-110			
Fluoride	11.1	0.30	0.004	mg/L	10.020	0.10	110	90-110			
Sulfate	249	1.0	0.09	mg/L	10.050	262	NR	90-110			QM-02
Matrix Spike Dup (7060500-MSD1)			**Source: AAF0595-02**			Prepared & Analyzed: 06/16/17					
Chloride	18.8	0.25	0.01	mg/L	10.020	9.02	98	90-110	0.5	15	
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.13	108	90-110	1	15	
Sulfate	25.0	1.0	0.09	mg/L	10.050	16.2	88	90-110	0.2	15	QM-02

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June 22, 2017

Report No.: AAF0595

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060482 - EPA 3005A											
Blank (7060482-BLK1)						Prepared & Analyzed: 06/16/17					
Antimony	0.0008	0.0030	0.0006	mg/L							J
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							
LCS (7060482-BS1)						Prepared & Analyzed: 06/16/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.0962	0.0050	0.0005	mg/L	0.10000		96	80-120			
Barium	0.0959	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.101	0.0030	0.00009	mg/L	0.10000		101	80-120			
Boron	1.03	0.0400	0.0060	mg/L	1.0000		103	80-120			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000		103	80-120			
Calcium	0.941	0.500	0.0404	mg/L	1.0000		94	80-120			
Chromium	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Copper	0.0986	0.0250	0.0003	mg/L	0.10000		99	80-120			
Lead	0.0993	0.0050	0.00007	mg/L	0.10000		99	80-120			
Molybdenum	0.0996	0.0100	0.0010	mg/L	0.10000		100	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Selenium	0.0986	0.0100	0.0018	mg/L	0.10000		99	80-120			
Silver	0.0972	0.0100	0.0002	mg/L	0.10000		97	80-120			
Thallium	0.0999	0.0010	0.00005	mg/L	0.10000		100	80-120			
Vanadium	0.0992	0.0100	0.0012	mg/L	0.10000		99	80-120			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000		104	80-120			
Lithium	0.102	0.0500	0.0015	mg/L	0.10000		102	80-120			

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060482 - EPA 3005A											
Matrix Spike (7060482-MS1)		**Source: AAF0595-01**			Prepared & Analyzed: 06/16/17						
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	0.0014	105	75-125			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000	0.0009	100	75-125			
Barium	0.162	0.0100	0.0004	mg/L	0.10000	0.0726	89	75-125			
Beryllium	0.0999	0.0030	0.00009	mg/L	0.10000	ND	100	75-125			
Boron	0.988	0.0400	0.0060	mg/L	1.0000	0.0078	98	75-125			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125			
Calcium	18.0	25.0	2.02	mg/L	1.0000	18.1	NR	75-125			QM-02, J
Chromium	0.105	0.0100	0.0005	mg/L	0.10000	0.0012	104	75-125			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125			
Copper	0.104	0.0250	0.0003	mg/L	0.10000	0.0007	103	75-125			
Lead	0.0995	0.0050	0.00007	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125			
Nickel	0.106	0.0100	0.0005	mg/L	0.10000	0.0015	105	75-125			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125			
Silver	0.0989	0.0100	0.0002	mg/L	0.10000	ND	99	75-125			
Thallium	0.0994	0.0010	0.00005	mg/L	0.10000	ND	99	75-125			
Vanadium	0.112	0.0100	0.0012	mg/L	0.10000	0.0056	107	75-125			
Zinc	0.115	0.0100	0.0012	mg/L	0.10000	0.0126	103	75-125			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000	0.0054	101	75-125			
Matrix Spike Dup (7060482-MSD1)		**Source: AAF0595-01**			Prepared & Analyzed: 06/16/17						
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	0.0014	102	75-125	2	20	
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000	0.0009	100	75-125	0.03	20	
Barium	0.158	0.0100	0.0004	mg/L	0.10000	0.0726	86	75-125	2	20	
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000	ND	102	75-125	2	20	
Boron	1.05	0.0400	0.0060	mg/L	1.0000	0.0078	104	75-125	6	20	
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125	0.2	20	
Calcium	17.5	25.0	2.02	mg/L	1.0000	18.1	NR	75-125	3	20	QM-02, J
Chromium	0.107	0.0100	0.0005	mg/L	0.10000	0.0012	106	75-125	2	20	
Cobalt	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125	3	20	
Copper	0.103	0.0250	0.0003	mg/L	0.10000	0.0007	102	75-125	0.9	20	
Lead	0.0995	0.0050	0.00007	mg/L	0.10000	ND	99	75-125	0.008	20	
Molybdenum	0.0998	0.0100	0.0010	mg/L	0.10000	ND	100	75-125	2	20	
Nickel	0.105	0.0100	0.0005	mg/L	0.10000	0.0015	103	75-125	1	20	
Selenium	0.103	0.0100	0.0018	mg/L	0.10000	ND	103	75-125	1	20	
Silver	0.0968	0.0100	0.0002	mg/L	0.10000	ND	97	75-125	2	20	
Thallium	0.100	0.0010	0.00005	mg/L	0.10000	ND	100	75-125	0.9	20	
Vanadium	0.112	0.0100	0.0012	mg/L	0.10000	0.0056	107	75-125	0.09	20	
Zinc	0.120	0.0100	0.0012	mg/L	0.10000	0.0126	107	75-125	4	20	
Lithium	0.105	0.0500	0.0015	mg/L	0.10000	0.0054	100	75-125	0.5	20	

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June 22, 2017

Report No.: AAF0595

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060482 - EPA 3005A											
Post Spike (7060482-PS1)			**Source: AAF0595-01**			Prepared & Analyzed: 06/16/17					
Antimony	96.1			ug/L	100.00	1.36	95	80-120			
Arsenic	101			ug/L	100.00	0.932	101	80-120			
Barium	165			ug/L	100.00	72.6	92	80-120			
Beryllium	105			ug/L	100.00	0.0032	105	80-120			
Boron	1040			ug/L	1000.0	7.81	104	80-120			
Cadmium	104			ug/L	100.00	0.0203	104	80-120			
Calcium	19200			ug/L	1000.0	18100	108	80-120			
Chromium	108			ug/L	100.00	1.16	106	80-120			
Cobalt	103			ug/L	100.00	0.128	103	80-120			
Copper	106			ug/L	100.00	0.652	105	80-120			
Lead	98.1			ug/L	100.00	0.0249	98	80-120			
Molybdenum	104			ug/L	100.00	0.950	103	80-120			
Nickel	104			ug/L	100.00	1.53	102	80-120			
Selenium	102			ug/L	100.00	0.617	101	80-120			
Silver	98.8			ug/L	100.00	0.0035	99	80-120			
Thallium	98.7			ug/L	100.00	0.0309	99	80-120			
Vanadium	112			ug/L	100.00	5.61	107	80-120			
Zinc	120			ug/L	100.00	12.6	107	80-120			
Lithium	107			ug/L	100.00	5.37	102	80-120			
Batch 7060592 - EPA 7470A											
Blank (7060592-BLK1)						Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7060592-BS1)						Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00256	0.00050	0.000041	mg/L	2.5000E-3		102	80-120			

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June 22, 2017

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060592 - EPA 7470A											
Matrix Spike (7060592-MS1)			**Source: AAF0595-09**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	0.00007	93	75-125			
Matrix Spike Dup (7060592-MSD1)			**Source: AAF0595-09**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3	0.00007	95	75-125	2	20	
Post Spike (7060592-PS1)			**Source: AAF0595-09**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	1.73			ug/L	1.6667	0.0444	101	80-120			
Batch 7060593 - EPA 7470A											
Blank (7060593-BLK1)						Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7060593-BS1)						Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00257	0.00050	0.000041	mg/L	2.5000E-3		103	80-120			
Matrix Spike (7060593-MS1)			**Source: AAF0595-01**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	0.00006	99	75-125			
Matrix Spike Dup (7060593-MSD1)			**Source: AAF0595-01**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00262	0.00050	0.000041	mg/L	2.5000E-3	0.00006	102	75-125	3	20	
Post Spike (7060593-PS1)			**Source: AAF0595-01**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	1.88			ug/L	1.6667	0.0424	110	80-120			

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June 22, 2017

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

R-01 Elevated reporting limit due to matrix interference.

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE 30185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Jojy Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: labarch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE:	PRESERVATION:	metals (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 SM 2540C)	Radium-226 + 228 (SW-846 9315/9320)	LAB ID NUMBER
6-14-17	0959	GW		X	BRGWA-12I	4			1	1	2	1
6-14-17	1055	GW		X	PZ-40S	4			1	1	2	2
6-14-17	1139	GW		X	BRGWL-29I	4			1	1	2	3
6-14-17	1304	GW		X	PZ-41S	4			1	1	2	4
6-14-17	1305	GW		X	BRGWL-32S	4			1	1	2	5
6-14-17	1436	GW		X	BRGWL-33S	4			1	1	2	6
6-14-17	1425	W		X	RB-2	4			1	1	2	7
6-14-17	1454	GW		X	BRGWL-30I	4			1	1	2	8
6-14-17	1532	GW		X	BRGWL-34S	4			1	1	2	9
6-14-17	1540	W		X	FB-2	4			1	1	2	10
6-14-17	—	GW		X	DUP-2	4			1	1	2	11

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER, WW - WASTEWATER, GW - GROUNDWATER, SW - SURFACE WATER, ST - STORM WATER, W - WATER, S - SOIL, SL - SLUDGE, SD - SOLID, A - AIR, L - LIQUID, P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Travis Martinez, Scientist | DATE/TIME: 6-14-17 / 1700

RELINQUISHED BY: [signature] | DATE/TIME: 6-15-17 / 1019

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: [signature] | DATE/TIME: 06/15/17 1500

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: 3.2 Min: 3.2 Max | Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #: AAF0595
Entered Into LIMS: MR
Tracking #:

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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LOG-IN CHECKLIST **Printed: 6/16/2017 10:34:04AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 06/15/17 15:00

Work Order: AAF0595
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 11 **#Containers:** 44

Minimum Temp(C): 3.2 **Maximum Temp(C):** 3.2 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 07, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on June 16, 2017. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30221830001	**BRGWA-12I**	Water	06/14/17 09:59	06/16/17 10:15
30221830002	**PZ-40S**	Water	06/14/17 10:55	06/16/17 10:15
30221830003	**BRGWC-29I**	Water	06/14/17 11:39	06/16/17 10:15
30221830004	**PZ-41S**	Water	06/14/17 13:04	06/16/17 10:15
30221830005	**BRGWC-32S**	Water	06/14/17 13:05	06/16/17 10:15
30221830006	**BRGWC-33S**	Water	06/14/17 14:36	06/16/17 10:15
30221830007	**RB-2**	Water	06/14/17 14:25	06/16/17 10:15
30221830008	**BRGWC-30I**	Water	06/14/17 14:54	06/16/17 10:15
30221830009	**BRGWC-34S**	Water	06/14/17 15:32	06/16/17 10:15
30221830010	**FB-2**	Water	06/14/17 15:40	06/16/17 10:15
30221830011	**Dup-2**	Water	06/14/17 00:00	06/16/17 10:15

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30221830001	**BRGWA-12I**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830002	**PZ-40S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830003	**BRGWC-29I**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830004	**PZ-41S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830005	**BRGWC-32S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830006	**BRGWC-33S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830007	**RB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830008	**BRGWC-30I**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830009	**BRGWC-34S**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830010	**FB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30221830011	**Dup-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Sample: BRGWA-12I **Lab ID: 30221830001** Collected: 06/14/17 09:59 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.260 ± 0.181 (0.298) C:96% T:NA**	pCi/L	06/29/17 08:18	13982-63-3	
Radium-228	EPA 9320	**2.40 ± 0.720 (0.936) C:72% T:80%**	pCi/L	06/30/17 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**2.66 ± 0.901 (1.23)**	pCi/L	07/03/17 15:15	7440-14-4	

Sample: PZ-40S **Lab ID: 30221830002** Collected: 06/14/17 10:55 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.173 ± 0.207 (0.435) C:93% T:NA**	pCi/L	06/29/17 08:18	13982-63-3	
Radium-228	EPA 9320	**0.0214 ± 0.285 (0.662) C:76% T:87%**	pCi/L	06/30/17 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.194 ± 0.492 (1.10)**	pCi/L	07/03/17 15:15	7440-14-4	

Sample: BRGWC-29I **Lab ID: 30221830003** Collected: 06/14/17 11:39 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.421 ± 0.260 (0.436) C:89% T:NA**	pCi/L	06/29/17 08:18	13982-63-3	
Radium-228	EPA 9320	**0.897 ± 0.447 (0.776) C:77% T:73%**	pCi/L	06/30/17 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**1.32 ± 0.707 (1.21)**	pCi/L	07/03/17 15:15	7440-14-4	

Sample: PZ-41S **Lab ID: 30221830004** Collected: 06/14/17 13:04 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.260 ± 0.189 (0.278) C:74% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.600 ± 0.392 (0.742) C:78% T:75%**	pCi/L	06/30/17 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.860 ± 0.581 (1.02)**	pCi/L	07/03/17 15:15	7440-14-4	

Sample: BRGWC-32S **Lab ID: 30221830005** Collected: 06/14/17 13:05 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.160 ± 0.144 (0.253) C:92% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.299 ± 0.406 (0.868) C:72% T:74%**	pCi/L	06/30/17 16:03	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Sample: BRGWC-32S **Lab ID: 30221830005** Collected: 06/14/17 13:05 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.459 ± 0.550 (1.12)**	pCi/L	07/06/17 15:01	7440-14-4	

Sample: BRGWC-33S **Lab ID: 30221830006** Collected: 06/14/17 14:36 Received: 06/16/17 10:15 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 ± 0.183 (0.263) C:86% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.445 ± 0.419 (0.856) C:76% T:69%**	pCi/L	06/30/17 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.723 ± 0.602 (1.12)**	pCi/L	07/06/17 15:01	7440-14-4	

Sample: RB-2 **Lab ID: 30221830007** Collected: 06/14/17 14:25 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0855 ± 0.137 (0.302) C:87% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.549 ± 0.427 (0.838) C:73% T:65%**	pCi/L	06/30/17 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.635 ± 0.564 (1.14)**	pCi/L	07/06/17 15:01	7440-14-4	

Sample: BRGWC-30I **Lab ID: 30221830008** Collected: 06/14/17 14:54 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0191 ± 0.101 (0.269) C:91% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.707 ± 0.422 (0.778) C:78% T:71%**	pCi/L	06/30/17 16:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.726 ± 0.523 (1.05)**	pCi/L	07/06/17 15:01	7440-14-4	

Sample: BRGWC-34S **Lab ID: 30221830009** Collected: 06/14/17 15:32 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.257 ± 0.192 (0.321) C:83% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.544 ± 0.348 (0.650) C:77% T:83%**	pCi/L	06/30/17 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.801 ± 0.540 (0.971)**	pCi/L	07/06/17 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

Sample: FB-2 **Lab ID: 30221830010** Collected: 06/14/17 15:40 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.12 ± 0.377 (0.378) C:88% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.727 ± 0.469 (0.893) C:73% T:73%**	pCi/L	06/30/17 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**1.85 ± 0.846 (1.27)**	pCi/L	07/06/17 15:01	7440-14-4	

Sample: Dup-2 **Lab ID: 30221830011** Collected: 06/14/17 00:00 Received: 06/16/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.380 ± 0.234 (0.361) C:81% T:NA**	pCi/L	06/29/17 08:20	13982-63-3	
Radium-228	EPA 9320	**0.965 ± 0.495 (0.874) C:77% T:68%**	pCi/L	06/30/17 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**1.35 ± 0.729 (1.24)**	pCi/L	07/06/17 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

QC Batch: 262720 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30221830001, 30221830002, 30221830003, 30221830004, 30221830005, 30221830006, 30221830007, 30221830008, 30221830009, 30221830010, 30221830011

METHOD BLANK: 1293766 Matrix: Water
Associated Lab Samples: 30221830001, 30221830002, 30221830003, 30221830004, 30221830005, 30221830006, 30221830007, 30221830008, 30221830009, 30221830010, 30221830011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0275 ± 0.105 (0.325) C:84% T:NA	pCi/L	06/29/17 08:18	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

QC Batch: 262718 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30221830001, 30221830002, 30221830003, 30221830004, 30221830005, 30221830006, 30221830007, 30221830008, 30221830009, 30221830010, 30221830011

METHOD BLANK: 1293764 Matrix: Water
Associated Lab Samples: 30221830001, 30221830002, 30221830003, 30221830004, 30221830005, 30221830006, 30221830007, 30221830008, 30221830009, 30221830010, 30221830011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.132 ± 0.385 (0.862) C:75% T:74%	pCi/L	06/30/17 16:03	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAF0595 Plant Branch
Pace Project No.: 30221830

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.

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.

30221830

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAF0595 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 7/11/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

WO#:30221830

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	BRGWA-12I	G	6/14/2017 9:59	AAF0595-01	GW	2	X	001
2	PZ-40S	G	6/14/2017 10:55	AAF0595-02	GW	2	X	002
3	BRGWC-29I	G	6/14/2047 11:39	AAF0595-03	GW	2	X	003
4	PZ-41S	G	6/14/2017 13:04	AAF0595-04	GW	2	X	004
5	BRGWC-32S	G	6/14/2017 13:05	AAF0595-05	GW	2	X	005
6	BRGWC-33S	G	6/14/2017 14:36	AAF0595-06	GW	2	X	006
7	RB-2	G	6/14/2017 14:25	AAF0595-07	W	2	X	007
8	BRGWC-30I	G	6/14/2017 14:54	AAF0595-08	GW	2	X	008
9	BRGWC-34S	G	6/14/2017 15:32	AAF0595-09	GW	2	X	009
10	FB-2	G	6/14/2017 15:40	AAF0595-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	6/15/17	[illegible]	6/16/17 1015	
2					
3					

Cooler Temperature on Receipt NA °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30221830

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAF0595 Workorder Name: Plant Branch Owner Received Date: Results Requested By: 7/11/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
11	Dup-2	G	6/14/2017 0:00	AAF0595-11	GW	2	X	011
12								
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	6/15/17	[illegible]	[illegible]	
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30221830

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE 310185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joyce Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: iabarch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals (EPA 6020/7470) APP 3+4	TDS, Cl, F, SO4 (EPA 300.0 45M 2540C)	Radium-226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
6-14-17	0959	GW		X	BRGWA-12I	4	1	1	2	1
6-14-17	1055	GW		X	PZ-40S	4	1	1	2	2
6-14-17	1139	GW		X	BRGWL-29I	4	1	1	2	3
6-14-17	1304	GW		X	PZ-41S	4	1	1	2	4
6-14-17	1305	GW		X	BRGWL-32S	4	1	1	2	5
6-14-17	1436	GW		X	BRGWL-33S	4	1	1	2	6
6-14-17	1425	W		X	RB-2	4	1	1	2	7
6-14-17	1454	GW		X	BRGWL-30I	4	1	1	2	8
6-14-17	1532	GW		X	BRGWL-34S	4	1	1	2	9
6-14-17	1540	W		X	FB-2	4	1	1	2	10
6-14-17	—	GW		X	DUP-2	4	1	1	2	11

ANALYSIS REQUESTED — CONTAINER TYPE: P P P | PRESERVATION: 3 1 3

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Travis Martinez, Scientist | DATE/TIME: 6-14-17 / 1700

RELINQUISHED BY: | DATE/TIME: 6-15-17 / 1019

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: Mzatman | DATE/TIME: 06/15/17 1500

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS:

pH checked: Yes No NA | Ice: Yes No NA | Temperature: 3.2 Minc 3.2 Meac | Custody Seal: Intact Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #: AAF0595
Entered Into LIMS:
Tracking #:

ML

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace GA Project # 30221830

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8812 6105 0640

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ~~JRM~~ 01/06/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation.	✓			15. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: JRM Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: JRM Date: 01/06/17

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	6/27/2017
Worklist:	36334
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1293766
MB concentration:	-0.028
M/B Counting Uncertainty:	0.105
MB MDC:	0.325
MB Numerical Performance Indicator:	-0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36334	LCSD36334
Count Date:	6/29/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.200	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.508	
Target Conc. (pCi/L, g, F):	15.789	
Uncertainty (Calculated):	1.454	
Result (pCi/L, g, F):	12.340	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.015	
Numerical Performance Indicator:	-3.81	
Percent Recovery:	78.16%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30222149005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30222149005DUP	
Sample Result (pCi/L, g, F):	0.243	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.156	
Sample Duplicate Result (pCi/L, g, F):	0.296	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.178	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.439	30222149005
Duplicate RPD:	19.60%	30222149005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

6/27/17

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	6/26/2017
Worklist:	36332
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1293764
MB concentration:	0.132
M/B Counting Uncertainty:	0.384
MB MDC:	0.862
MB Numerical Performance Indicator:	0.67
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36332	LCSD36332
Count Date:	6/30/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.164	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	6.043	
Uncertainty (Calculated):	0.435	
Result (pCi/L, g, F):	5.700	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.668	
Numerical Performance Indicator:	-0.84	
Percent Recovery:	94.32%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30222149005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30222149005DUP	
Sample Result (pCi/L, g, F):	0.527	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.363	
Sample Duplicate Result (pCi/L, g, F):	0.843	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.406	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.137	30222149005
Duplicate RPD:	46.14%	30222149005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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:	

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.

6/29/17

LABORATORY ANALYTICAL DATA

September 2017

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AAI0865
October 05, 2017
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Signature

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWA-2S	AAI0865-01	Ground Water	09/26/17 09:59	09/27/17 13:41
BRGWA-2I	AAI0865-02	Ground Water	09/26/17 11:24	09/27/17 13:41
BRGWA-5S	AAI0865-03	Ground Water	09/26/17 11:50	09/27/17 13:41
BRGWA-5I	AAI0865-04	Ground Water	09/26/17 11:24	09/27/17 13:41
BRGWA-6S	AAI0865-05	Ground Water	09/26/17 08:43	09/27/17 13:41
BRGWA-12S	AAI0865-06	Ground Water	09/26/17 15:25	09/27/17 13:41
BRGWA-12I	AAI0865-07	Ground Water	09/26/17 15:35	09/27/17 13:41
BRGWA-23S	AAI0865-08	Ground Water	09/26/17 13:28	09/27/17 13:41
PZ-42S	AAI0865-09	Ground Water	09/26/17 16:28	09/27/17 13:41
Dup-1	AAI0865-10	Ground Water	09/26/17 00:00	09/27/17 13:41
FB-1	AAI0865-11	Water	09/26/17 16:30	09/27/17 13:41
RB-1	AAI0865-12	Water	09/26/17 16:35	09/27/17 13:41

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-2S
Date/Time Sampled: 09/26/2017 9:59:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-01
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	45	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	1.8	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 15:36	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 15:36	7090751	RLC
Sulfate	0.62	1.0	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 15:36	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Barium	0.0096	0.0100	0.0004	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Calcium	3.31	0.500	0.0404	mg/L	EPA 6020B	B-01	1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Chromium	0.0045	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Cobalt	0.0020	0.0100	0.0003	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 17:50	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 16:46	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-2I
Date/Time Sampled: 09/26/2017 11:24:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-02
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	167	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 16:38	7090751	RLC
Fluoride	0.14	0.30	0.03	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 16:38	7090751	RLC
Sulfate	5.4	1.0	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 16:38	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Arsenic	0.0010	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Barium	0.0156	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Boron	0.0093	0.0400	0.0060	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Calcium	14.3	5.00	2.02	mg/L	EPA 6020B	B-01	50	09/29/17 11:15	09/29/17 18:07	7090781	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Molybdenum	0.0011	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Lithium	0.0549	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:01	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 16:48	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-5S
Date/Time Sampled: 09/26/2017 11:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-03
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	138	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	4.1	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 16:59	7090751	RLC
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 16:59	7090751	RLC
Sulfate	0.92	1.0	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 16:59	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Barium	0.0586	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Calcium	24.0	5.00	2.02	mg/L	EPA 6020B	B-01	50	09/29/17 11:15	09/29/17 18:19	7090781	CSW
Chromium	0.0037	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:13	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 16:55	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-5I
Date/Time Sampled: 09/26/2017 11:24:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-04
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	108	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 17:19	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 17:19	7090751	RLC
Sulfate	4.1	1.0	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 17:19	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Barium	0.0364	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Calcium	14.4	5.00	2.02	mg/L	EPA 6020B	B-01	50	09/29/17 11:15	09/29/17 18:41	7090781	CSW
Chromium	0.0039	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Cobalt	0.0016	0.0100	0.0003	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Molybdenum	0.0053	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:36	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 16:57	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-6S
Date/Time Sampled: 09/26/2017 8:43:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-05
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	29	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	2.3	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 17:40	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 17:40	7090751	RLC
Sulfate	0.53	1.0	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 17:40	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Barium	0.0133	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Calcium	3.15	0.500	0.0404	mg/L	EPA 6020B	B-01	1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Chromium	0.0144	0.0100	0.0005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Lithium	0.0023	0.0500	0.0015	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:47	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:00	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-12S
Date/Time Sampled: 09/26/2017 3:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-06
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	68	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	3.3	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:01	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:01	7090751	RLC
Sulfate	1.3	1.0	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:01	7090751	RLC
Metals, Total											
Antimony	0.0032	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Barium	0.0547	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Calcium	4.49	0.500	0.0404	mg/L	EPA 6020B	B-01	1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Chromium	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 18:58	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:02	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-12I
Date/Time Sampled: 09/26/2017 3:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-07
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	149	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	3.3	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:22	7090751	RLC
Fluoride	0.10	0.30	0.03	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 18:22	7090751	RLC
Sulfate	2.5	1.0	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:22	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Barium	0.0765	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Calcium	19.3	5.00	2.02	mg/L	EPA 6020B	B-01	50	09/29/17 11:15	09/29/17 19:16	7090781	CSW
Chromium	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Lithium	0.0037	0.0500	0.0015	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:10	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:05	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: BRGWA-23S
Date/Time Sampled: 09/26/2017 1:28:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-08
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	160	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:43	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 18:43	7090751	RLC
Sulfate	89	5.0	0.08	mg/L	EPA 300.0		5	09/28/17 09:52	10/03/17 15:59	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Barium	0.104	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Calcium	15.0	5.00	2.02	mg/L	EPA 6020B	B-01	50	09/29/17 11:15	09/29/17 19:27	7090781	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Cobalt	0.0037	0.0100	0.0003	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Lithium	0.0087	0.0500	0.0015	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:21	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:07	7090822	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: PZ-42S
Date/Time Sampled: 09/26/2017 4:28:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-09
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	119	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	5.4	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 20:29	7090751	RLC
Fluoride	0.21	0.30	0.03	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 20:29	7090751	RLC
Sulfate	13	1.0	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 20:29	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Barium	0.0114	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Boron	0.0193	0.0400	0.0060	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Calcium	15.8	5.00	2.02	mg/L	EPA 6020B	B-01	50	09/29/17 11:15	09/29/17 19:50	7090781	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Molybdenum	0.0036	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:44	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:09	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: Dup-1
Date/Time Sampled: 09/26/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0865-10
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	61	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	3.3	0.25	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 21:10	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 21:10	7090751	RLC
Sulfate	1.2	1.0	0.02	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 21:10	7090751	RLC
Metals, Total											
Antimony	0.0033	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Barium	0.0570	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Calcium	4.46	0.500	0.0404	mg/L	EPA 6020B	B-01	1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Chromium	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 19:56	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:12	7090822	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: FB-1
Date/Time Sampled: 09/26/2017 4:30:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAI0865-11
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 21:30	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 21:30	7090751	RLC
Sulfate	0.03	1.0	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 21:30	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:07	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:14	7090822	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0865
Client ID: RB-1
Date/Time Sampled: 09/26/2017 4:35:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAI0865-12
Date/Time Received: 09/27/2017 1:41:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/29/17 12:45	09/29/17 12:45	7090799	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 21:51	7090751	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/28/17 09:52	09/28/17 21:51	7090751	RLC
Sulfate	0.03	1.0	0.02	mg/L	EPA 300.0	J	1	09/28/17 09:52	09/28/17 21:51	7090751	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Calcium	0.0413	0.500	0.0404	mg/L	EPA 6020B	B-01, J	1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	09/29/17 11:15	09/29/17 20:13	7090781	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/02/17 11:30	10/02/17 17:16	7090822	MTC

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October 05, 2017

Report No.: AAI0865

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090799 - SM 2540 C											
Blank (7090799-BLK1)						Prepared & Analyzed: 09/29/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7090799-BS1)						Prepared & Analyzed: 09/29/17					
Total Dissolved Solids	383	25	10	mg/L	400.00		96	84-108			
Duplicate (7090799-DUP1)		**Source: AAI0865-02**				Prepared & Analyzed: 09/29/17					
Total Dissolved Solids	150	25	10	mg/L		167			11	10	QR-03
Duplicate (7090799-DUP2)		**Source: AAI0865-12**				Prepared & Analyzed: 09/29/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Report No.: AAI0865

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090751 - EPA 300.0											
Blank (7090751-BLK1)						Prepared & Analyzed: 09/28/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7090751-BS1)						Prepared & Analyzed: 09/28/17					
Chloride	10.5	0.25	0.02	mg/L	10.020		105	90-110			
Fluoride	9.84	0.30	0.03	mg/L	10.020		98	90-110			
Sulfate	10.5	1.0	0.02	mg/L	10.050		104	90-110			
Matrix Spike (7090751-MS1)			**Source: AAI0865-01**			Prepared & Analyzed: 09/28/17					
Chloride	12.3	0.25	0.02	mg/L	10.020	1.76	105	90-110			
Fluoride	10.0	0.30	0.03	mg/L	10.020	ND	100	90-110			
Sulfate	11.2	1.0	0.02	mg/L	10.050	0.62	106	90-110			
Matrix Spike (7090751-MS2)			**Source: AAI0865-09**			Prepared & Analyzed: 09/28/17					
Chloride	16.0	0.25	0.02	mg/L	10.020	5.42	106	90-110			
Fluoride	10.5	0.30	0.03	mg/L	10.020	0.21	103	90-110			
Sulfate	22.9	1.0	0.02	mg/L	10.050	13.3	95	90-110			
Matrix Spike Dup (7090751-MSD1)			**Source: AAI0865-01**			Prepared & Analyzed: 09/28/17					
Chloride	12.3	0.25	0.02	mg/L	10.020	1.76	105	90-110	0.1	15	
Fluoride	10.1	0.30	0.03	mg/L	10.020	ND	101	90-110	0.5	15	
Sulfate	11.3	1.0	0.02	mg/L	10.050	0.62	106	90-110	0.2	15	

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Report No.: AAI0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090781 - EPA 3005A											
Blank (7090781-BLK1)						Prepared & Analyzed: 09/29/17					
Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	0.0504	0.500	0.0404	mg/L							J
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	0.0010	0.0100	0.0005	mg/L							J
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	0.0013	0.0100	0.0012	mg/L							J
Lithium	ND	0.0500	0.0015	mg/L							
LCS (7090781-BS1)						Prepared & Analyzed: 09/29/17					
Antimony	0.0971	0.0030	0.0006	mg/L	0.10000		97	80-120			
Arsenic	0.0964	0.0050	0.0005	mg/L	0.10000		96	80-120			
Barium	0.0962	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Cadmium	0.0954	0.0010	0.0001	mg/L	0.10000		95	80-120			
Chromium	0.0975	0.0100	0.0005	mg/L	0.10000		97	80-120			
Cobalt	0.0984	0.0100	0.0003	mg/L	0.10000		98	80-120			
Copper	0.0972	0.0250	0.0003	mg/L	0.10000		97	80-120			
Lead	0.0995	0.0050	0.00007	mg/L	0.10000		99	80-120			
Nickel	0.0996	0.0100	0.0005	mg/L	0.10000		100	80-120			
Selenium	0.0973	0.0100	0.0018	mg/L	0.10000		97	80-120			
Silver	0.0947	0.0100	0.0002	mg/L	0.10000		95	80-120			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000		104	80-120			
Vanadium	0.101	0.0100	0.0012	mg/L	0.10000		101	80-120			
Zinc	0.0982	0.0100	0.0012	mg/L	0.10000		98	80-120			
Lithium	0.0978	0.0500	0.0015	mg/L	0.10000		98	80-120			

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Report No.: AAI0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090781 - EPA 3005A											
Matrix Spike (7090781-MS1)		**Source: AAI0808-01**				Prepared & Analyzed: 09/29/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000	ND	102	75-125			
Arsenic	0.0968	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Barium	0.124	0.0100	0.0004	mg/L	0.10000	0.0228	101	75-125			
Beryllium	0.103	0.0030	0.00009	mg/L	0.10000	ND	103	75-125			
Cadmium	0.0991	0.0010	0.0001	mg/L	0.10000	ND	99	75-125			
Chromium	0.0988	0.0100	0.0005	mg/L	0.10000	0.0018	97	75-125			
Cobalt	0.0932	0.0100	0.0003	mg/L	0.10000	ND	93	75-125			
Copper	0.0943	0.0250	0.0003	mg/L	0.10000	ND	94	75-125			
Lead	0.0995	0.0050	0.00007	mg/L	0.10000	0.00008	99	75-125			
Nickel	0.100	0.0100	0.0005	mg/L	0.10000	0.0015	99	75-125			
Selenium	0.0946	0.0100	0.0018	mg/L	0.10000	ND	95	75-125			
Silver	0.0984	0.0100	0.0002	mg/L	0.10000	ND	98	75-125			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	0.0001	104	75-125			
Vanadium	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125			
Zinc	0.0985	0.0100	0.0012	mg/L	0.10000	0.0020	96	75-125			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000	ND	106	75-125			
Matrix Spike Dup (7090781-MSD1)		**Source: AAI0808-01**				Prepared & Analyzed: 09/29/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	ND	104	75-125	2	20	
Arsenic	0.0999	0.0050	0.0005	mg/L	0.10000	ND	100	75-125	3	20	
Barium	0.125	0.0100	0.0004	mg/L	0.10000	0.0228	102	75-125	0.8	20	
Beryllium	0.101	0.0030	0.00009	mg/L	0.10000	ND	101	75-125	2	20	
Cadmium	0.100	0.0010	0.0001	mg/L	0.10000	ND	100	75-125	1	20	
Chromium	0.104	0.0100	0.0005	mg/L	0.10000	0.0018	103	75-125	6	20	
Cobalt	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125	7	20	
Copper	0.0991	0.0250	0.0003	mg/L	0.10000	ND	99	75-125	5	20	
Lead	0.0990	0.0050	0.00007	mg/L	0.10000	0.00008	99	75-125	0.5	20	
Nickel	0.102	0.0100	0.0005	mg/L	0.10000	0.0015	100	75-125	2	20	
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125	7	20	
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125	2	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	0.0001	102	75-125	2	20	
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	ND	108	75-125	7	20	
Zinc	0.100	0.0100	0.0012	mg/L	0.10000	0.0020	98	75-125	2	20	
Lithium	0.0984	0.0500	0.0015	mg/L	0.10000	ND	98	75-125	8	20	

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October 05, 2017

Report No.: AAI0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090781 - EPA 3005A											
Post Spike (7090781-PS1)			**Source: AAI0808-01**			Prepared & Analyzed: 09/29/17					
Antimony	96.1			ug/L	100.00	0.167	96	80-120			
Arsenic	98.8			ug/L	100.00	0.411	98	80-120			
Barium	121			ug/L	100.00	22.8	98	80-120			
Beryllium	99.8			ug/L	100.00	0.0277	100	80-120			
Cadmium	99.1			ug/L	100.00	0.0266	99	80-120			
Chromium	103			ug/L	100.00	1.84	101	80-120			
Cobalt	96.7			ug/L	100.00	0.227	97	80-120			
Copper	98.0			ug/L	100.00	0.113	98	80-120			
Lead	96.7			ug/L	100.00	0.0829	97	80-120			
Nickel	100			ug/L	100.00	1.48	99	80-120			
Selenium	98.2			ug/L	100.00	-0.0984	98	80-120			
Silver	96.6			ug/L	100.00	0.0060	97	80-120			
Thallium	98.5			ug/L	100.00	0.124	98	80-120			
Vanadium	105			ug/L	100.00	0.338	104	80-120			
Zinc	98.3			ug/L	100.00	2.02	96	80-120			
Lithium	97.7			ug/L	100.00	0.463	97	80-120			
Batch 7090822 - EPA 7470A											
Blank (7090822-BLK1)						Prepared & Analyzed: 10/02/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7090822-BS1)						Prepared & Analyzed: 10/02/17					
Mercury	0.00243	0.00050	0.000036	mg/L	2.5000E-3		97	80-120			
Matrix Spike (7090822-MS1)			**Source: AAI0810-01**			Prepared & Analyzed: 10/02/17					
Mercury	0.00232	0.00050	0.000036	mg/L	2.5000E-3	ND	93	75-125			

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Report No.: AAI0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090822 - EPA 7470A											
Matrix Spike Dup (7090822-MSD1)			**Source: AAI0810-01**			Prepared & Analyzed: 10/02/17					
Mercury	0.00203	0.00050	0.000036	mg/L	2.5000E-3	ND	81	75-125	13	20	
Post Spike (7090822-PS1)			**Source: AAI0810-01**			Prepared & Analyzed: 10/02/17					
Mercury	1.74			ug/L	1.6667	-0.0230	105	80-120			

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com
Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE 310185
Atlanta, GA 30308 P:404-506-7239

REPORT TO: Soju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE: -
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
09-26-17	0959	GW		X	BRGWA-2S	4	1	1	2	1	
09-26-17	1124	GW		X	BRGWA-2I	4	1	1	2	2	
09-26-17	1150	GW		X	BRGWA-5S	4	1	1	2	3	
09-26-17	1124	GW		X	BRGWA-5I	4	1	1	2	4	
09-26-17	0843	GW		X	BRGWA-6S	4	1	1	2	5	
09-26-17	1525	GW		X	BRGWA-12S	4	1	1	2	6	
09-26-17	1535	GW		X	BRGWA-12I	6	1	1	4	7	2nd Rad Sampled
09-26-17	1328	GW		X	BRGWA-23S	4	1	1	2	8	
09-26-17	1628	GW		X	PZ-42S	4	1	1	2	9	
09-26-17	-	GW		X	DUP-1	4	1	1	2	10	
09-26-17	1630	W		X	FB-1	4	1	1	2	11	
09-26-17	1635	W		X	RB-1	4	1	1	2	12	

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: William Ballew, Geologist
DATE/TIME: 09-26-17/1730
RELINQUISHED BY: William Ballew
DATE/TIME: 9-27-17/1200

RECEIVED BY: TEIOC
DATE/TIME: 9-27-17 1200
RELINQUISHED BY: TEIOC
DATE/TIME: 9-27-17 1341

RECEIVED BY/LAB: Laburman
DATE/TIME: 09/27/17 1341
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Packed: (Yes) No NA
Ice: (Yes) No NA
Temperature: Min: 0.2 Max:
Custody Seal: (Intact) Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAI 0865
Entered into LIMS: MR
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAI0865

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Optional: Proj Due Date: Proj Name:

Tracking #: _____

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 9/27/17 MA

Temp should be above freezing to 6°C

Comments:

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

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 9/28/2017 9:19:55AM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/27/17 13:41

Work Order: AAI0865
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 12 **#Containers:** 50

Minimum Temp(C): 0.2 **Maximum Temp(C):** 0.2 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 13, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 28, 2017. 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30231328001	**BRGWA-2S**	Water	09/26/17 09:59	09/28/17 10:15
30231328002	**BRGWA-2I**	Water	09/26/17 11:24	09/28/17 10:15
30231328003	**BRGWA-5S**	Water	09/26/17 11:50	09/28/17 10:15
30231328004	**BRGWA-5I**	Water	09/26/17 11:24	09/28/17 10:15
30231328005	**BRGWA-6S**	Water	09/26/17 08:43	09/28/17 10:15
30231328006	**BRGWA-12S**	Water	09/26/17 15:25	09/28/17 10:15
30231328007	**BRGWA-12I**	Water	09/26/17 15:35	09/28/17 10:15
30231328008	**BRGWA-23S**	Water	09/26/17 13:28	09/28/17 10:15
30231328009	**PZ-42S**	Water	09/26/17 16:28	09/28/17 10:15
30231328010	**DUP-1**	Water	09/26/17 00:00	09/28/17 10:15
30231328011	**FB-1**	Water	09/26/17 16:30	09/28/17 10:15
30231328012	**RB-1**	Water	09/26/17 16:35	09/28/17 10:15

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30231328001	**BRGWA-2S**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328002	**BRGWA-2I**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328003	**BRGWA-5S**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328004	**BRGWA-5I**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328005	**BRGWA-6S**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328006	**BRGWA-12S**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328007	**BRGWA-12I**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328008	**BRGWA-23S**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328009	**PZ-42S**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328010	**DUP-1**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328011	**FB-1**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30231328012	**RB-1**	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Sample: BRGWA-2S **Lab ID: 30231328001** Collected: 09/26/17 09:59 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.156 ± 0.187 (0.384) C:93% T:NA**	pCi/L	10/04/17 08:25	13982-63-3	
Radium-228	EPA 9320	**0.143 ± 0.430 (0.964) C:78% T:83%**	pCi/L	10/11/17 17:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.299 ± 0.617 (1.35)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-2I **Lab ID: 30231328002** Collected: 09/26/17 11:24 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.314 ± 0.232 (0.394) C:94% T:NA**	pCi/L	10/04/17 08:25	13982-63-3	
Radium-228	EPA 9320	**0.531 ± 0.436 (0.865) C:78% T:80%**	pCi/L	10/11/17 17:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.845 ± 0.668 (1.26)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-5S **Lab ID: 30231328003** Collected: 09/26/17 11:50 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.292 ± 0.220 (0.370) C:95% T:NA**	pCi/L	10/04/17 08:25	13982-63-3	
Radium-228	EPA 9320	**0.470 ± 0.420 (0.849) C:78% T:87%**	pCi/L	10/11/17 17:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.762 ± 0.640 (1.22)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-5I **Lab ID: 30231328004** Collected: 09/26/17 11:24 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.195 ± 0.221 (0.450) C:89% T:NA**	pCi/L	10/04/17 08:25	13982-63-3	
Radium-228	EPA 9320	**0.425 ± 0.406 (0.828) C:77% T:89%**	pCi/L	10/11/17 17:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.620 ± 0.627 (1.28)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-6S **Lab ID: 30231328005** Collected: 09/26/17 08:43 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.167 ± 0.190 (0.376) C:91% T:NA**	pCi/L	10/04/17 08:25	13982-63-3	
Radium-228	EPA 9320	**-0.434 ± 0.327 (0.866) C:78% T:85%**	pCi/L	10/11/17 17:54	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Sample: BRGWA-6S **Lab ID: 30231328005** Collected: 09/26/17 08:43 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.167 ± 0.517 (1.24)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-12S **Lab ID: 30231328006** Collected: 09/26/17 15:25 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.403 ± 0.250 (0.376) C:89% T:NA**	pCi/L	10/04/17 08:26	13982-63-3	
Radium-228	EPA 9320	**0.157 ± 0.309 (0.682) C:79% T:89%**	pCi/L	10/11/17 17:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.560 ± 0.559 (1.06)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-12I **Lab ID: 30231328007** Collected: 09/26/17 15:35 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.513 ± 0.272 (0.388) C:94% T:NA**	pCi/L	10/04/17 08:26	13982-63-3	
Radium-228	EPA 9320	**0.328 ± 0.378 (0.791) C:79% T:85%**	pCi/L	10/11/17 17:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.841 ± 0.650 (1.18)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: BRGWA-23S **Lab ID: 30231328008** Collected: 09/26/17 13:28 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.756 ± 0.381 (0.572) C:80% T:NA**	pCi/L	10/04/17 08:26	13982-63-3	
Radium-228	EPA 9320	**0.501 ± 0.432 (0.865) C:80% T:80%**	pCi/L	10/11/17 17:56	15262-20-1	
Total Radium	Total Radium Calculation	**1.26 ± 0.813 (1.44)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: PZ-42S **Lab ID: 30231328009** Collected: 09/26/17 16:28 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.305 ± 0.263 (0.489) C:79% T:NA**	pCi/L	10/04/17 08:26	13982-63-3	
Radium-228	EPA 9320	**0.173 ± 0.397 (0.882) C:78% T:91%**	pCi/L	10/11/17 17:50	15262-20-1	
Total Radium	Total Radium Calculation	**0.478 ± 0.660 (1.37)**	pCi/L	10/13/17 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

Sample: DUP-1 **Lab ID: 30231328010** Collected: 09/26/17 00:00 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.818 ± 0.364 (0.447) C:79% T:NA**	pCi/L	10/04/17 08:26	13982-63-3	
Radium-228	EPA 9320	**0.427 ± 0.463 (0.966) C:79% T:83%**	pCi/L	10/11/17 17:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.25 ± 0.827 (1.41)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: FB-1 **Lab ID: 30231328011** Collected: 09/26/17 16:30 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.258 ± 0.236 (0.453) C:88% T:NA**	pCi/L	10/04/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.278 ± 0.437 (0.947) C:80% T:78%**	pCi/L	10/11/17 17:50	15262-20-1	
Total Radium	Total Radium Calculation	**0.536 ± 0.673 (1.40)**	pCi/L	10/13/17 08:51	7440-14-4	

Sample: RB-1 **Lab ID: 30231328012** Collected: 09/26/17 16:35 Received: 09/28/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.366 ± 0.245 (0.389) C:84% T:NA**	pCi/L	10/04/17 08:26	13982-63-3	
Radium-228	EPA 9320	**0.0254 ± 0.424 (0.983) C:77% T:76%**	pCi/L	10/11/17 17:50	15262-20-1	
Total Radium	Total Radium Calculation	**0.391 ± 0.669 (1.37)**	pCi/L	10/13/17 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

QC Batch: 273680 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30231328001, 30231328002, 30231328003, 30231328004, 30231328005, 30231328006, 30231328007, 30231328008, 30231328009, 30231328010, 30231328011, 30231328012

METHOD BLANK: 1346118 Matrix: Water
Associated Lab Samples: 30231328001, 30231328002, 30231328003, 30231328004, 30231328005, 30231328006, 30231328007, 30231328008, 30231328009, 30231328010, 30231328011, 30231328012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.235 ± 0.194 (0.342) C:100% T:NA	pCi/L	10/04/17 08:25	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

QC Batch: 273681 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30231328001, 30231328002, 30231328003, 30231328004, 30231328005, 30231328006, 30231328007, 30231328008, 30231328009, 30231328010, 30231328011, 30231328012

METHOD BLANK: 1346129 Matrix: Water
Associated Lab Samples: 30231328001, 30231328002, 30231328003, 30231328004, 30231328005, 30231328006, 30231328007, 30231328008, 30231328009, 30231328010, 30231328011, 30231328012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.514 ± 0.344 (0.659) C:81% T:90%	pCi/L	10/11/17 15:48	

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAI0865 Plant Branch
Pace Project No.: 30231328

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.

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.

30231328

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAI0865 Workorder Name: Plant Branch Owner Received Date: 9/27/2017 Results Requested By: 10/18/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

WO# : 30231328

30231328

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3					Requested Analysis: Radium 226, 228, Total											LAB USE ONLY
1	BRGWA-2S	Grab	9/26/17 0959	AAI0865-01	GW	2					X											001
2	BRGWA-2I	Grab	9/26/17 1124	AAI0865-02	GW	2					X											002
3	BRGWA-5S	Grab	9/26/17 1150	AAI0865-03	GW	2					X											003
4	BRGWA-5I	Grab	9/26/17 1124	AAI0865-04	GW	2					X											004
5	BRGWA-6S	Grab	9/26/17 0843	AAI0865-05	GW	2					X											005
6	BRGWA-12S	Grab	9/26/17 1525	AAI0865-06	GW	2					X											006
7	BRGWA-12I	Grab	9/26/17 1535	AAI0865-07	GW	4					X											007
8	BRGWA-23S	Grab	9/26/17 1328	AAI0865-08	GW	2					X											008
9	PZ-42S	Grab	9/26/17 1628	AAI0865-09	GW	2					X											009
10	DUP-1	Grab	9/26/17 0000	AAI0865-10	GW	2					X											010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	9/27/17		9/28/17 1015	Suitability testing
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30231328 –

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAI0865 Workorder Name: Plant Branch Owner Received Date: 9/27/2017 Results Requested By: 10/18/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	FB-1	Grab	9/26/2017 1630	AAI0865-11	W	2	X	011
12	RB-1	Grab	9/26/2017 1635	AAI0865-12	W	2	X	012
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	9/27/17		9/28/17 1015	Suitability testing
2					
3					

Cooler Temperature on Receipt NA °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30231328 - 9502

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, Inc
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE 310185
Atlanta, GA 30308 P:404-506-7239

REPORT TO: Soju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE: -
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
09-26-17	0959	GW		X	BRGWA-2S	4	1	1	2	1	
09-26-17	1124	GW		X	BRGWA-2I	4	1	1	2	2	
09-26-17	1150	GW		X	BRGWA-5S	4	1	1	2	3	
09-26-17	1124	GW		X	BRGWA-5I	4	1	1	2	4	
09-26-17	0843	GW		X	BRGWA-6S	4	1	1	2	5	
09-26-17	1525	GW		X	BRGWA-12S	4	1	1	2	6	
09-26-17	1535	GW		X	BRGWA-12I	6	1	1	4	7	2nd Rad Sampled
09-26-17	1328	GW		X	BRGWA-23S	4	1	1	2	8	
09-26-17	1628	GW		X	PZ-42S	4	1	1	2	9	
09-26-17	-	GW		X	DUP-1	4	1	1	2	10	
09-26-17	1630	W		X	FB-1	4	1	1	2	11	
09-26-17	1635	W		X	RB-1	4	1	1	2	12	

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: William Ballew, Geologist
DATE/TIME: 09-26-17/1730

RELINQUISHED BY: William Ballew
DATE/TIME: 9-27-17/1200

RECEIVED BY: TEIDC
DATE/TIME: 9-27-17 1200

RELINQUISHED BY: TEIDC
DATE/TIME: 9-27-17 1341

RECEIVED BY LAB: Laburman
DATE/TIME: 09/27/17 1341

FOR LAB USE ONLY
LAB #: AAI0865
Entered into LIMS: MR

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Tracking #:

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0° Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

COC Revised 2016-05-17.xlsx

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace GA Project # 30231328

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label ZH

LIMS Login ZH

Tracking #: 774136658530

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ZH 9/28/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4. 9/18/17
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	✓ ✓			16. pH ≤ 2 Initial when completed ZH Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present: Trip Blank Custody Seals Present			✓ ✓	18.
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH Date: 9/28/17

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: ~~Received 1 container for sample 012.~~ ZH 9/28/17

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	10/4/2017
Worklist:	38021
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1346129
MB concentration:	0.514
M/B Counting Uncertainty:	0.332
MB MDC:	0.659
MB Numerical Performance Indicator:	3.03
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS38021	LCSD38021
Count Date:	10/11/2017	10/11/2017
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	23.296	23.296
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.813	0.814
Target Conc. (pCi/L, g, F):	5.729	5.726
Uncertainty (Calculated):	0.413	0.412
Result (pCi/L, g, F):	5.697	6.233
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.646	0.643
Numerical Performance Indicator:	-0.08	1.30
Percent Recovery:	99.43%	108.85%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS38021	
Duplicate Sample I.D.	LCSD38021	
Sample Result (pCi/L, g, F):	5.697	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.646	
Sample Duplicate Result (pCi/L, g, F):	6.233	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.643	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-1.153	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	9.05%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

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:	

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

Comments:

10/13/17

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	LAL
Date:	10/3/2017
Worklist:	38020
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1346118
MB concentration:	0.235
M/B Counting Uncertainty:	0.191
MB MDC:	0.342
MB Numerical Performance Indicator:	2.41
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS38020	LCSD38020
Count Date:	10/4/2017	10/4/2017
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.191	80.191
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.512	0.512
Target Conc. (pCi/L, g, F):	15.673	15.674
Uncertainty (Calculated):	1.444	1.444
Result (pCi/L, g, F):	13.050	12.207
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.317	1.051
Numerical Performance Indicator:	-2.63	-3.80
Percent Recovery:	83.27%	77.89%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS38020	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD38020	
Sample Result (pCi/L, g, F):	13.050	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.317	
Sample Duplicate Result (pCi/L, g, F):	12.207	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.051	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	0.981	
Duplicate RPD:	6.68%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

10/13/17

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AAI0919
October 05, 2017
Project: CCR Event
Project #:Plant Branch

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Signature

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRGWC-24S	AAI0919-01	Ground Water	09/27/17 11:16	09/28/17 14:15
BRGWC-25I	AAI0919-02	Ground Water	09/27/17 09:48	09/28/17 14:15
BRGWC-27I	AAI0919-03	Ground Water	09/27/17 10:25	09/28/17 14:15
BRGWC-29I	AAI0919-04	Ground Water	09/27/17 12:18	09/28/17 14:15
BRGWC-30I	AAI0919-05	Ground Water	09/27/17 11:55	09/28/17 14:15
BRGWC-32S	AAI0919-06	Ground Water	09/27/17 14:18	09/28/17 14:15
BRGWC-33S	AAI0919-07	Ground Water	09/27/17 15:23	09/28/17 14:15
BRGWC-34S	AAI0919-08	Ground Water	09/27/17 15:48	09/28/17 14:15
PZ-40S	AAI0919-09	Ground Water	09/27/17 10:18	09/28/17 14:15
PZ-41S	AAI0919-10	Ground Water	09/27/17 09:16	09/28/17 14:15
Dup-2	AAI0919-11	Ground Water	09/27/17 00:00	09/28/17 14:15
FB-2	AAI0919-12	Water	09/27/17 16:10	09/28/17 14:15
RB-2	AAI0919-13	Water	09/27/17 16:15	09/28/17 14:15

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-24S
Date/Time Sampled: 09/27/2017 11:16:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-01
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	170	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	14	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 13:34	7090802	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 13:34	7090802	RLC
Sulfate	12	1.0	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 13:34	7090802	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Barium	0.0475	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Boron	0.0103	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Calcium	19.1	5.00	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 18:13	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Cobalt	0.0014	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Lithium	0.0037	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:07	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:38	7100044	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-25I
Date/Time Sampled: 09/27/2017 9:48:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-02
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	457	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	7.9	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 13:55	7090802	RLC
Fluoride	0.50	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 13:55	7090802	RLC
Sulfate	310	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 02:32	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Barium	0.0383	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Boron	1.75	0.200	0.0298	mg/L	EPA 6020B		5	10/02/17 11:20	10/03/17 15:45	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Calcium	65.8	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 18:36	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Cobalt	0.0087	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:30	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:41	7100044	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-27I
Date/Time Sampled: 09/27/2017 10:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-03
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	376	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	4.9	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 14:16	7090802	RLC
Fluoride	0.40	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 14:16	7090802	RLC
Sulfate	260	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 02:53	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Barium	0.0170	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Boron	1.16	0.0400	0.0060	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Calcium	72.6	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 18:47	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Cobalt	0.0095	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Selenium	0.0040	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Lithium	0.0016	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:42	7090818	CSW
Mercury	0.000047	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:43	7100044	MTC

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Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-29I
Date/Time Sampled: 09/27/2017 12:18:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-04
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	518	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	8.7	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 14:36	7090802	RLC
Fluoride	0.40	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 14:36	7090802	RLC
Sulfate	380	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 03:14	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Arsenic	0.0016	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Barium	0.0165	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Beryllium	0.0010	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Boron	1.83	0.200	0.0298	mg/L	EPA 6020B		5	10/02/17 11:20	10/03/17 15:50	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Calcium	84.0	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 18:59	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Cobalt	0.0094	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Lead	0.0006	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Selenium	0.0068	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Lithium	0.0038	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 18:53	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:46	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-30I
Date/Time Sampled: 09/27/2017 11:55:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-05
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	432	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 15:38	7090802	RLC
Fluoride	0.41	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 15:38	7090802	RLC
Sulfate	260	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 03:34	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Barium	0.0213	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Boron	1.61	0.200	0.0298	mg/L	EPA 6020B		5	10/02/17 11:20	10/03/17 15:56	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Calcium	63.5	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 19:10	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Selenium	0.0034	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Lithium	0.0116	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:05	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:48	7100044	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-32S
Date/Time Sampled: 09/27/2017 2:18:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-06
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	601	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	7.2	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 15:59	7090802	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 15:59	7090802	RLC
Sulfate	400	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 03:55	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Barium	0.0411	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Boron	1.51	0.200	0.0298	mg/L	EPA 6020B		5	10/02/17 11:20	10/03/17 16:02	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Calcium	68.4	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 19:22	7090818	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Selenium	0.0019	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Lithium	0.0021	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:16	7090818	CSW
Mercury	0.00010	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:55	7100044	MTC

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-33S
Date/Time Sampled: 09/27/2017 3:23:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-07
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	303	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	5.4	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 16:20	7090802	RLC
Fluoride	0.42	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 16:20	7090802	RLC
Sulfate	200	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 04:16	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Barium	0.0219	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Beryllium	0.0017	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Boron	1.04	0.0400	0.0060	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Calcium	49.5	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 19:45	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Cobalt	0.0490	0.0100	0.0003	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Selenium	0.0036	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Lithium	0.0099	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:39	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 15:57	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: BRGWC-34S
Date/Time Sampled: 09/27/2017 3:48:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-08
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	579	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	7.6	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 16:40	7090802	RLC
Fluoride	0.40	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 16:40	7090802	RLC
Sulfate	360	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 04:37	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Barium	0.0347	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Boron	2.40	2.00	0.298	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 19:56	7090818	CSW
Cadmium	0.0007	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Calcium	95.8	25.0	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 19:56	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Cobalt	0.0028	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 19:50	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 16:00	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: PZ-40S
Date/Time Sampled: 09/27/2017 10:18:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-09
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	187	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	9.1	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 18:24	7090802	RLC
Fluoride	0.16	0.30	0.03	mg/L	EPA 300.0	J	1	09/29/17 09:47	09/29/17 18:24	7090802	RLC
Sulfate	13	1.0	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 18:24	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Barium	0.0536	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Boron	0.0234	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Calcium	18.2	5.00	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 20:08	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Cobalt	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Lithium	0.0030	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:02	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 16:02	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: PZ-41S
Date/Time Sampled: 09/27/2017 9:16:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-10
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	246	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	5.4	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 19:05	7090802	RLC
Fluoride	0.28	0.30	0.03	mg/L	EPA 300.0	J	1	09/29/17 09:47	09/29/17 19:05	7090802	RLC
Sulfate	100	10	0.17	mg/L	EPA 300.0		10	09/29/17 09:47	10/05/17 04:59	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Arsenic	0.0022	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Barium	0.0748	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Boron	0.428	0.0400	0.0060	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Calcium	22.4	5.00	2.02	mg/L	EPA 6020B		50	10/02/17 11:20	10/02/17 20:19	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Cobalt	0.0097	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Lithium	0.0033	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:13	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 16:05	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: Dup-2
Date/Time Sampled: 09/27/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAI0919-11
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	173	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	15	0.25	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 19:26	7090802	RLC
Fluoride	0.31	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 19:26	7090802	RLC
Sulfate	12	1.0	0.02	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 19:26	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Barium	0.0482	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Boron	0.0099	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Calcium	17.5	2.50	0.202	mg/L	EPA 6020B		5	10/02/17 11:20	10/02/17 20:59	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Cobalt	0.0017	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Lithium	0.0033	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:25	7090818	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 16:07	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: FB-2
Date/Time Sampled: 09/27/2017 4:10:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAI0919-12
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.02	mg/L	EPA 300.0	J	1	09/29/17 09:47	09/29/17 19:46	7090802	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 19:46	7090802	RLC
Sulfate	0.05	1.0	0.02	mg/L	EPA 300.0	J	1	09/29/17 09:47	09/29/17 19:46	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:48	7090818	CSW
Mercury	0.00005	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 16:09	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919
Client ID: RB-2
Date/Time Sampled: 09/27/2017 4:15:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAI0919-13
Date/Time Received: 09/28/2017 2:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/02/17 16:30	10/02/17 16:30	7100011	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	09/29/17 09:47	09/29/17 20:07	7090802	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	09/29/17 09:47	09/29/17 20:07	7090802	RLC
Sulfate	0.03	1.0	0.02	mg/L	EPA 300.0	J	1	09/29/17 09:47	09/29/17 20:07	7090802	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Cadmium	0.0008	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/02/17 11:20	10/02/17 20:53	7090818	CSW
Mercury	0.00005	0.00050	0.000036	mg/L	EPA 7470A	B-01, J	1	10/04/17 10:40	10/04/17 16:12	7100044	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100011 - SM 2540 C											
Blank (7100011-BLK1)						Prepared & Analyzed: 10/02/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100011-BS1)						Prepared & Analyzed: 10/02/17					
Total Dissolved Solids	380	25	10	mg/L	400.00		95	84-108			
Duplicate (7100011-DUP1)		**Source: AAI0919-13**				Prepared & Analyzed: 10/02/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7100011-DUP2)		**Source: AAI0974-04**				Prepared & Analyzed: 10/02/17					
Total Dissolved Solids	28	25	10	mg/L		35			22	10	QR-03

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October 05, 2017

Report No.: AAI0919

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090802 - EPA 300.0											
Blank (7090802-BLK1)						Prepared & Analyzed: 09/29/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7090802-BS1)						Prepared & Analyzed: 09/29/17					
Chloride	10.5	0.25	0.02	mg/L	10.020		105	90-110			
Fluoride	9.86	0.30	0.03	mg/L	10.020		98	90-110			
Sulfate	10.5	1.0	0.02	mg/L	10.050		104	90-110			
Matrix Spike (7090802-MS1)			**Source: AAI0919-04**			Prepared & Analyzed: 09/29/17					
Chloride	18.4	0.25	0.02	mg/L	10.020	8.73	96	90-110			
Fluoride	12.7	0.30	0.03	mg/L	10.020	0.40	122	90-110			QM-05
Sulfate	241	1.0	0.02	mg/L	10.050	256	NR	90-110			QM-02
Matrix Spike (7090802-MS2)			**Source: AAI0919-09**			Prepared & Analyzed: 09/29/17					
Chloride	20.5	0.25	0.02	mg/L	10.020	9.06	114	90-110			QM-05
Fluoride	10.2	0.30	0.03	mg/L	10.020	0.16	100	90-110			
Sulfate	22.2	1.0	0.02	mg/L	10.050	12.8	93	90-110			
Matrix Spike Dup (7090802-MSD1)			**Source: AAI0919-04**			Prepared & Analyzed: 09/29/17					
Chloride	18.3	0.25	0.02	mg/L	10.020	8.73	95	90-110	0.5	15	
Fluoride	12.9	0.30	0.03	mg/L	10.020	0.40	125	90-110	2	15	QM-05
Sulfate	241	1.0	0.02	mg/L	10.050	256	NR	90-110	0.01	15	QM-02

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Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090818 - EPA 3005A											
Blank (7090818-BLK1)						Prepared & Analyzed: 10/02/17					
Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							
LCS (7090818-BS1)						Prepared & Analyzed: 10/02/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000		102	80-120			
Arsenic	0.0973	0.0050	0.0005	mg/L	0.10000		97	80-120			
Barium	0.0991	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.0969	0.0030	0.00009	mg/L	0.10000		97	80-120			
Cadmium	0.0981	0.0010	0.0001	mg/L	0.10000		98	80-120			
Chromium	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Cobalt	0.0978	0.0100	0.0003	mg/L	0.10000		98	80-120			
Copper	0.0974	0.0250	0.0003	mg/L	0.10000		97	80-120			
Lead	0.0988	0.0050	0.00007	mg/L	0.10000		99	80-120			
Nickel	0.0980	0.0100	0.0005	mg/L	0.10000		98	80-120			
Selenium	0.0981	0.0100	0.0018	mg/L	0.10000		98	80-120			
Silver	0.101	0.0100	0.0002	mg/L	0.10000		101	80-120			
Thallium	0.0986	0.0010	0.00005	mg/L	0.10000		99	80-120			
Vanadium	0.0977	0.0100	0.0012	mg/L	0.10000		98	80-120			
Zinc	0.0999	0.0100	0.0012	mg/L	0.10000		100	80-120			
Lithium	0.107	0.0500	0.0015	mg/L	0.10000		107	80-120			

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October 05, 2017

Report No.: AAI0919

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090818 - EPA 3005A											
Matrix Spike (7090818-MS1)		**Source: AAI0919-01**				Prepared & Analyzed: 10/02/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000	0.0008	101	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	ND	103	75-125			
Barium	0.146	0.0100	0.0004	mg/L	0.10000	0.0475	98	75-125			
Beryllium	0.0964	0.0030	0.00009	mg/L	0.10000	ND	96	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0014	100	75-125			
Copper	0.100	0.0250	0.0003	mg/L	0.10000	0.0010	99	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125			
Nickel	0.107	0.0100	0.0005	mg/L	0.10000	0.0059	101	75-125			
Selenium	0.0980	0.0100	0.0018	mg/L	0.10000	ND	98	75-125			
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	ND	101	75-125			
Vanadium	0.106	0.0100	0.0012	mg/L	0.10000	ND	106	75-125			
Zinc	0.125	0.0100	0.0012	mg/L	0.10000	0.0257	100	75-125			
Lithium	0.105	0.0500	0.0015	mg/L	0.10000	0.0037	101	75-125			
Matrix Spike Dup (7090818-MSD1)		**Source: AAI0919-01**				Prepared & Analyzed: 10/02/17					
Antimony	0.105	0.0030	0.0006	mg/L	0.10000	0.0008	104	75-125	3	20	
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000	ND	101	75-125	2	20	
Barium	0.148	0.0100	0.0004	mg/L	0.10000	0.0475	101	75-125	2	20	
Beryllium	0.0982	0.0030	0.00009	mg/L	0.10000	ND	98	75-125	2	20	
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125	3	20	
Chromium	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125	1	20	
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0014	101	75-125	0.8	20	
Copper	0.101	0.0250	0.0003	mg/L	0.10000	0.0010	100	75-125	1	20	
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125	0.2	20	
Nickel	0.106	0.0100	0.0005	mg/L	0.10000	0.0059	100	75-125	0.9	20	
Selenium	0.0992	0.0100	0.0018	mg/L	0.10000	ND	99	75-125	1	20	
Silver	0.102	0.0100	0.0002	mg/L	0.10000	ND	102	75-125	0.8	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	ND	102	75-125	1	20	
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000	ND	105	75-125	0.8	20	
Zinc	0.122	0.0100	0.0012	mg/L	0.10000	0.0257	97	75-125	2	20	
Lithium	0.107	0.0500	0.0015	mg/L	0.10000	0.0037	104	75-125	3	20	

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Attention: Mr. Joju Abraham

October 05, 2017

Report No.: AAI0919

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090818 - EPA 3005A											
Post Spike (7090818-PS1)			**Source: AAI0919-01**			Prepared & Analyzed: 10/02/17					
Antimony	95.4			ug/L	100.00	0.771	95	80-120			
Arsenic	103			ug/L	100.00	0.379	102	80-120			
Barium	147			ug/L	100.00	47.5	99	80-120			
Beryllium	98.9			ug/L	100.00	0.0418	99	80-120			
Cadmium	99.7			ug/L	100.00	-0.0146	100	80-120			
Chromium	105			ug/L	100.00	0.149	105	80-120			
Cobalt	101			ug/L	100.00	1.43	100	80-120			
Copper	105			ug/L	100.00	1.01	104	80-120			
Lead	97.8			ug/L	100.00	0.0546	98	80-120			
Nickel	107			ug/L	100.00	5.85	101	80-120			
Selenium	99.2			ug/L	100.00	0.366	99	80-120			
Silver	102			ug/L	100.00	0.0058	102	80-120			
Thallium	100			ug/L	100.00	0.0279	100	80-120			
Vanadium	111			ug/L	100.00	1.04	110	80-120			
Zinc	130			ug/L	100.00	25.7	105	80-120			
Lithium	106			ug/L	100.00	3.73	102	80-120			
Batch 7100044 - EPA 7470A											
Blank (7100044-BLK1)						Prepared & Analyzed: 10/04/17					
Mercury	0.00004	0.00050	0.000036	mg/L							J
LCS (7100044-BS1)						Prepared & Analyzed: 10/04/17					
Mercury	0.00258	0.00050	0.000036	mg/L	2.5000E-3		103	80-120			
Matrix Spike (7100044-MS1)			**Source: AAI0919-02**			Prepared & Analyzed: 10/04/17					
Mercury	0.00249	0.00050	0.000036	mg/L	2.5000E-3	0.00004	98	75-125			

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October 05, 2017

Report No.: AAI0919

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100044 - EPA 7470A											
Matrix Spike Dup (7100044-MSD1)		**Source: AAI0919-02**			Prepared & Analyzed: 10/04/17						
Mercury	0.00240	0.00050	0.000036	mg/L	2.5000E-3	0.00004	95	75-125	4	20	
Post Spike (7100044-PS1)		**Source: AAI0919-02**			Prepared & Analyzed: 10/04/17						
Mercury	1.70			ug/L	1.6667	0.0259	100	80-120			

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October 05, 2017

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

B-01 Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

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PAGE: 1 OF 2

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE 310185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla

REQUESTED COMPLETION DATE: —

PO #: labwch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)
CONTAINER TYPE:	P	P	P
PRESERVATION:	3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)	LAB I.D. NUMBER	REMARKS/ADDITIONAL INFORMATION
9-27-17	1116	GW		X	BRGWC-24S	4	1	1	2	1	
9-27-17	0948	GW		X	BRGWC-25I	4	1	1	2	2	
9-27-17	1025	GW		X	BRGWC-27I	4	1	1	2	3	
9-27-17	1218	GW		X	BRGWC-29I	4	1	1	2	4	
9-27-17	1155	GW		X	BRGWC-30I	6	1	1	4	5	2nd Rad. Sampled
9-27-17	1418	GW		X	BRGWC-32S	4	1	1	2	6	
9-27-17	1523	GW		X	BRGWC-33S	4	1	1	2	7	
9-27-17	1548	GW		X	BRGWC-34S	4	1	1	2	8	
9-27-17	1018	GW		X	PZ-40S	4	1	1	2	9	
9-27-17	0916	GW		X	PZ-41S	4	1	1	2	10	
9-27-17	—	GW		X	DUP-2	4	1	1	2	11	
9-27-17	1610	W		X	FB-2	4	1	1	2	12	

CONTAINER TYPE:
- P - PLASTIC
- A - AMBER GLASS
- G - CLEAR GLASS
- V - VOA VIAL
- S - STERILE
- O - OTHER

PRESERVATION:
- 1 - HCl, ≤6°C
- 2 - H_2SO_4, ≤6°C
- 3 - HNO_3
- 4 - NaOH, ≤6°C
- 5 - NaOH/ZnAc, ≤6°C
- 6 - $Na_2S_2O_3$, ≤6°C
- 7 - ≤6°C not frozen

*MATRIX CODES:
- DW - DRINKING WATER
- WW - WASTEWATER
- GW - GROUNDWATER
- SW - SURFACE WATER
- ST - STORM WATER
- W - WATER
- S - SOIL
- SL - SLUDGE
- SD - SOLID
- A - AIR
- L - LIQUID
- P - PRODUCT

SAMPLED BY AND TITLE: William Ballow, Geologist — DATE/TIME: 9-27-17/1700

RELINQUISHED BY: William Ballow — DATE/TIME: 9/28/17 1150

RECEIVED BY: [signature] — DATE/TIME: 9/28/17 11:__

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: M. Dalman — DATE/TIME: 09/28/17 1415

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

Checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: Min: 6.3 Max:

Custody Seal: (Intact) Broken Not Present N/A — # of Coolers — Cooler ID:

FOR LAB USE ONLY
LAB #: AAI0919
Entered into LIMS: MR
Tracking #:

Rev. 12/15/2016

CHAIN OF CUSTODY RECORD

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PAGE: 2 OF 2

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE 310185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Jojin Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)
CONTAINER TYPE:	P	P	P
PRESERVATION:	3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
9-27-17	1615	W		X	RB-~~1~~ 2 (9/28/17 KM)	4	1	1	2	13	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: William Ballew, Geologist | DATE/TIME: 9-27-17 / 1700

RELINQUISHED BY: William Ballew | DATE/TIME: 9/28/17 1150

RECEIVED BY: Charles Kane | DATE/TIME: 9/28/17 11:45

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: M Lahman | DATE/TIME: 09/28/17 1415

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

pH checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: Min: 0.3 Max: | Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #: AAI 0919
Entered into LIMS: MR
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAI0919

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other _____

Optional: Proj Due Date: Proj Name:

Tracking #: _____

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/28/17 MR

Comments:

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

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 10/02/2017 3:06:26PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/28/17 14:15

Work Order: AAI0919
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 13 **#Containers:** 54

Minimum Temp(C): 0.3 **Maximum Temp(C):** 0.3 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 27, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2017. 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.

Revision 1: This report replaces the October 18, 2017 report. Report reissued October 27, 2017 to reflect correction of collection time for Sample 30231661003 due to error on COC.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30231661001	**BRGWC-24S**	Water	09/27/17 11:16	10/02/17 09:40
30231661002	**BRGWC-25I**	Water	09/27/17 09:48	10/02/17 09:40
30231661003	**BRGWC-27I**	Water	09/27/17 10:25	10/02/17 09:40
30231661004	**BRGWC-29I**	Water	09/27/17 12:18	10/02/17 09:40
30231661005	**BRGWC-30I**	Water	09/27/17 11:55	10/02/17 09:40
30231661006	**BRGWC-32S**	Water	09/27/17 14:18	10/02/17 09:40
30231661007	**BRGWC-33S**	Water	09/27/17 15:23	10/02/17 09:40
30231661008	**BRGWC-34S**	Water	09/27/17 15:48	10/02/17 09:40
30231661009	**PZ-40S**	Water	09/27/17 10:18	10/02/17 09:40
30231661010	**PZ-41S**	Water	09/27/17 09:16	10/02/17 09:40
30231661011	**DUP-2**	Water	09/27/17 00:00	10/02/17 09:40
30231661012	**FB-2**	Water	09/27/17 16:10	10/02/17 09:40
30231661013	**RB-2**	Water	09/27/17 16:15	10/02/17 09:40

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30231661001	**BRGWC-24S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661002	**BRGWC-25I**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661003	**BRGWC-27I**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661004	**BRGWC-29I**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661005	**BRGWC-30I**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661006	**BRGWC-32S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661007	**BRGWC-33S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661008	**BRGWC-34S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661009	**PZ-40S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661010	**PZ-41S**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661011	**DUP-2**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661012	**FB-2**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30231661013	**RB-2**	EPA 9315	JC2	1

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Sample: BRGWC-24S **Lab ID: 30231661001** Collected: 09/27/17 11:16 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.470 ± 0.258 (0.326) C:86% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.322 ± 0.339 (0.704) C:84% T:86%**	pCi/L	10/12/17 15:35	15262-20-1	
Total Radium	Total Radium Calculation	**0.792 ± 0.597 (1.03)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-25I **Lab ID: 30231661002** Collected: 09/27/17 09:48 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.194 ± 0.186 (0.349) C:94% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.389 ± 0.327 (0.651) C:80% T:80%**	pCi/L	10/12/17 15:35	15262-20-1	
Total Radium	Total Radium Calculation	**0.583 ± 0.513 (1.000)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-27I **Lab ID: 30231661003** Collected: 09/27/17 10:25 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.473 ± 0.259 (0.360) C:96% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.122 ± 0.303 (0.675) C:84% T:83%**	pCi/L	10/12/17 15:35	15262-20-1	
Total Radium	Total Radium Calculation	**0.595 ± 0.562 (1.04)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-29I **Lab ID: 30231661004** Collected: 09/27/17 12:18 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.01 ± 0.367 (0.320) C:93% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.694 ± 0.365 (0.643) C:79% T:93%**	pCi/L	10/12/17 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.70 ± 0.732 (0.963)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-30I **Lab ID: 30231661005** Collected: 09/27/17 11:55 Received: 10/02/17 09:40 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 ± 0.258 (0.358) C:91% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.418 ± 0.344 (0.681) C:82% T:77%**	pCi/L	10/12/17 15:36	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Sample: BRGWC-30I **Lab ID: 30231661005** Collected: 09/27/17 11:55 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.884 ± 0.602 (1.04)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-32S **Lab ID: 30231661006** Collected: 09/27/17 14:18 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.559 ± 0.295 (0.431) C:91% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.248 ± 0.471 (1.03) C:76% T:90%**	pCi/L	10/12/17 15:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.807 ± 0.766 (1.46)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-33S **Lab ID: 30231661007** Collected: 09/27/17 15:23 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.480 ± 0.276 (0.409) C:89% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**1.02 ± 0.489 (0.859) C:82% T:81%**	pCi/L	10/12/17 15:40	15262-20-1	
Total Radium	Total Radium Calculation	**1.50 ± 0.765 (1.27)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: BRGWC-34S **Lab ID: 30231661008** Collected: 09/27/17 15:48 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.603 ± 0.282 (0.334) C:97% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.839 ± 0.539 (1.04) C:77% T:81%**	pCi/L	10/12/17 15:40	15262-20-1	
Total Radium	Total Radium Calculation	**1.44 ± 0.821 (1.37)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: PZ-40S **Lab ID: 30231661009** Collected: 09/27/17 10:18 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.332 ± 0.236 (0.375) C:85% T:NA**	pCi/L	10/06/17 09:02	13982-63-3	
Radium-228	EPA 9320	**0.00428 ± 0.404 (0.929) C:83% T:85%**	pCi/L	10/12/17 15:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.336 ± 0.640 (1.30)**	pCi/L	10/17/17 08:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

Sample: PZ-41S **Lab ID: 30231661010** Collected: 09/27/17 09:16 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.520 ± 0.284 (0.396) C:84% T:NA**	pCi/L	10/06/17 09:03	13982-63-3	
Radium-228	EPA 9320	**-0.153 ± 0.410 (0.969) C:77% T:87%**	pCi/L	10/12/17 15:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.520 ± 0.694 (1.37)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: DUP-2 **Lab ID: 30231661011** Collected: 09/27/17 00:00 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.451 ± 0.266 (0.376) C:91% T:NA**	pCi/L	10/06/17 09:04	13982-63-3	
Radium-228	EPA 9320	**0.531 ± 0.411 (0.820) C:79% T:86%**	pCi/L	10/12/17 15:34	15262-20-1	
Total Radium	Total Radium Calculation	**0.982 ± 0.677 (1.20)**	pCi/L	10/17/17 08:16	7440-14-4	

Sample: FB-2 **Lab ID: 30231661012** Collected: 09/27/17 16:10 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.295 ± 0.257 (0.490) C:93% T:NA**	pCi/L	10/06/17 09:07	13982-63-3	
Radium-228	EPA 9320	**0.329 ± 0.346 (0.720) C:87% T:85%**	pCi/L	10/12/17 15:34	15262-20-1	
Total Radium	Total Radium Calculation	**0.624 ± 0.603 (1.21)**	pCi/L	10/17/17 08:54	7440-14-4	

Sample: RB-2 **Lab ID: 30231661013** Collected: 09/27/17 16:15 Received: 10/02/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0828 ± 0.242 (0.582) C:83% T:NA**	pCi/L	10/06/17 09:08	13982-63-3	
Radium-228	EPA 9320	**0.404 ± 0.375 (0.769) C:81% T:84%**	pCi/L	10/12/17 15:34	15262-20-1	
Total Radium	Total Radium Calculation	**0.487 ± 0.617 (1.35)**	pCi/L	10/17/17 08:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

QC Batch: 273989 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30231661001, 30231661002, 30231661003, 30231661004, 30231661005, 30231661006, 30231661007, 30231661008, 30231661009, 30231661010, 30231661011, 30231661012, 30231661013

METHOD BLANK: 1347708 Matrix: Water
Associated Lab Samples: 30231661001, 30231661002, 30231661003, 30231661004, 30231661005, 30231661006, 30231661007, 30231661008, 30231661009, 30231661010, 30231661011, 30231661012, 30231661013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0956 ± 0.267 (0.656) C:81% T:80%	pCi/L	10/12/17 15:35	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

QC Batch: 273988 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30231661001, 30231661002, 30231661003, 30231661004, 30231661005, 30231661006, 30231661007, 30231661008, 30231661009, 30231661010, 30231661011, 30231661012, 30231661013

METHOD BLANK: 1347707 Matrix: Water
Associated Lab Samples: 30231661001, 30231661002, 30231661003, 30231661004, 30231661005, 30231661006, 30231661007, 30231661008, 30231661009, 30231661010, 30231661011, 30231661012, 30231661013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.295 ± 0.217 (0.342) C:86% T:NA	pCi/L	10/06/17 09:02	

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAI0919 Plant Branch
Pace Project No.: 30231661

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.

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.

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: AAI0919 Workorder Name: Plant Branch Owner Received Date: 9/28/2017 Results Requested By: 10/26/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

WO# : 30231661

30231661

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	BRGWC-24S	G	9/27/2017 11:16	AAI0919-01	GW	2	X	001
2	BRGWC-25I	G	9/27/2017 9:48	AAI0919-02	GW	2	X	002
3	BRGWC-27I	G	9/27/2017 10:05	AAI0919-03	GW	2	X	003
4	BRGWC-29I	G	9/27/2017 12:18	AAI0919-04	GW	2	X	004
5	BRGWC-30I	G	9/27/2017 11:55	AAI0919-05	GW	4	X	005
6	BRGWC-32S	G	9/27/2017 14:18	AAI0919-06	GW	2	X	006
7	BRGWC-33S	G	9/27/2017 15:23	AAI0919-07	GW	2	X	007
8	BRGWC-34S	G	9/27/2017 15:48	AAI0919-08	GW	2	X	008
9	PZ-40S	G	9/27/2017 10:18	AAI0919-09	GW	2	X	009
10	PZ-41S	G	9/27/2017 9:16	AAI0919-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	9/29/17	[signature]	10-2-17 940	
2					
3					

Cooler Temperature on Receipt NA °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Sample Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30231661

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: AAI0919 Workorder Name: Plant Branch Owner Received Date: 9/28/2017 Results Requested By: 10/26/2017

Report To:	Subcontract To:
Betsy McDaniel	Pace - Pittsburgh
Pace Analytical Atlanta	1638 Roseytown Road
110 Technology Parkway	Stes. 2,3,4
Peachtree Corners, GA 30092	Greensburg, PA 15601
Phone (770)-734-4200	Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
11	DUP-2	G	9/27/2017 0:00	AAI0919-11	GW	2					X												011
12	FB-2	G	9/27/2017 16:10	AAI0919-12	W	2					X												012
13	RB-2	G	9/27/2017 16:15	AAI0919-13	W	2					X												013
14																							
15																							
16																							
17																							
18																							
19																							
20																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			[signature]	10-2-17 0940	
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or (N)	Received on Ice Y or (N)	Sample Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30231661

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 2

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE 310185 Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham

CC: Marie Padilla

REQUESTED COMPLETION DATE: —

PO #: labwch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED:

	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)
CONTAINER TYPE	P	P	P
PRESERVATION	3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Appendix 3 and 4	TDS, Cl, F, SO4	Radium 226 and 228	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
9-27-17	1116	GW		X	BRGWC-24S	4	1	1	2	1	
9-27-17	0948	GW		X	BRGWC-25I	4	1	1	2	2	
9-27-17	1025	GW		X	BRGWC-27I	4	1	1	2	3	
9-27-17	1218	GW		X	BRGWC-29I	4	1	1	2	4	
9-27-17	1155	GW		X	BRGWC-30I	6	1	1	4	5	2nd Rad. Sampled
9-27-17	1418	GW		X	BRGWC-32S	4	1	1	2	6	
9-27-17	1523	GW		X	BRGWC-33S	4	1	1	2	7	
9-27-17	1548	GW		X	BRGWC-34S	4	1	1	2	8	
9-27-17	1018	GW		X	PZ-40S	4	1	1	2	9	
9-27-17	0916	GW		X	PZ-41S	4	1	1	2	10	
9-27-17	—	GW		X	DUP-2	4	1	1	2	11	
9-27-17	1610	W		X	FB-2	4	1	1	2	12	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: William Ballow, Geologist — DATE/TIME: 9-27-17/1700

RELINQUISHED BY: William Ballow — DATE/TIME: 9/28/17 1150

RECEIVED BY: Craig Kaner — DATE/TIME: 9/27/17 11:12

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: M Lahman — DATE/TIME: 09/28/17 1415

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

pH checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: Min: 0.3 Max: — Custody Seal: (Intact) Broken Not Present N/A — # of Coolers: — Cooler ID:

FOR LAB USE ONLY — LAB #: AAI0919 — Entered Into LIMS: MR — Tracking #:

30231661

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE 310185
Atlanta, GA 30308 P:404-506-7239

REPORT TO: Jojo Abraham
CC: Marlen Padilla
REQUESTED COMPLETION DATE: —
PO #: labarron@southernco.com

PROJECT NAME/STATE: Plant Branch
PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE	PRESERVATION	Metals Appendix 3 and 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 and SM2540C)	Radium 226 and 228 (SW-846 9315/9320)	LAB ID NUMBER
							P	3				
							P	7				
							P	3				
9-27-17	1615	W		X	RB-1 9/28/17 KM 2	4			1	1	2	13

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Balkcom, Geologist
DATE/TIME: 9-27-17 / 1700
RELINQUISHED BY: William Balkcom
DATE/TIME: 9/28/17 1150

RECEIVED BY: Charles Kanaan
DATE/TIME: 9/28/17 11:45
RELINQUISHED BY:
DATE/TIME:

FOR LAB USE ONLY
LAB #: AAI 0919
Entered into LIMS: MR

RECEIVED BY LAB: Mdahman
DATE/TIME: 09/28/17 1415
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Tracking #:

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.3 Max:
Custody Seal: Intact Broken Not Present N/A
# of coolers:
Cooler ID:

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace GA Project # 30231661

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label ML
LIMS Login ANL

Tracking #: 7413 6658 9400

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: ___ °C Final Temp: ___ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ML 10-2-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4. JW 10/2/17
Sample Labels match COC: -Includes date/time/ID Matrix: WT	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X			10.
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			X	13.
Organic Samples checked for dechlorination:			X	14.
Filtered volume received for Dissolved tests			X	15.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	X			16. PH < 2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed ML Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	17.
Trip Blank Present:		X		18.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: ML Date: 10-2-17

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	10/6/2017
Worklist:	38057
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1347708
MB concentration:	-0.096
M/B Counting Uncertainty:	0.267
MB MDC:	0.656
MB Numerical Performance Indicator:	-0.70
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38057	LCSD38057
Count Date:	10/12/2017	
Spike I.D.:	17-033	
Spike Concentration (pCi/mL):	23.289	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.801	
Target Conc. (pCi/L, g, F):	5.812	
Uncertainty (Calculated):	0.418	
Result (pCi/L, g, F):	5.926	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.786	
Numerical Performance Indicator:	0.25	
Percent Recovery:	101.97%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	30231661005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30231661005DUP	
Sample Result (pCi/L, g, F):	0.418	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.335	
Sample Duplicate Result (pCi/L, g, F):	0.435	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.325	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.070	30231661005
Duplicate RPD:	3.93%	30231661005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

10/10/2017

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	10/5/2017
Worklist:	38056
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1347707
MB concentration:	0.295
M/B Counting Uncertainty:	0.212
MB MDC:	0.342
MB Numerical Performance Indicator:	2.72
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS38056	LCSD38056
Count Date:	10/6/2017	10/6/2017
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.191	80.191
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.501	0.507
Target Conc. (pCi/L, g, F):	15.998	15.820
Uncertainty (Calculated):	1.474	1.457
Result (pCi/L, g, F):	13.819	12.457
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.181	1.116
Numerical Performance Indicator:	-2.26	-3.59
Percent Recovery:	86.38%	78.74%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Sample Matrix Spike Control Assessment	
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):	
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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS38056	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD38056	
Sample Result (pCi/L, g, F):	13.819	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.181	
Sample Duplicate Result (pCi/L, g, F):	12.457	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.116	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	1.643	
Duplicate RPD:	10.37%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	
MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	

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

Comments:

10/18/17

LABORATORY ANALYTICAL DATA

February 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 12, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 261915

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on February 15, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 261915

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Asheville Certification IDs

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, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 261915

Lab ID	Sample ID	Matrix	Date Collected	Date Received
261915001	**BRGWA-12S**	Water	02/14/18 09:06	02/15/18 15:45
261915002	**BRGWA-12S**	Water	02/14/18 09:06	02/15/18 15:45
261915003	**BRGWA-12I**	Water	02/14/18 11:20	02/15/18 15:45
261915004	**BRGWA-12I**	Water	02/14/18 11:20	02/15/18 15:45
261915005	**BRGWA-23S**	Water	02/14/18 12:05	02/15/18 15:45
261915006	**BRGWA-23S**	Water	02/14/18 12:05	02/15/18 15:45
261915007	**BRGWC-25I**	Water	02/14/18 13:18	02/15/18 15:45
261915008	**BRGWC-25I**	Water	02/14/18 13:18	02/15/18 15:45
261915009	**BRGWC-27I**	Water	02/14/18 13:20	02/15/18 15:45
261915010	**BRGWC-27I**	Water	02/14/18 13:20	02/15/18 15:45
261915011	**BRGWC-29I**	Water	02/14/18 14:06	02/15/18 15:45
261915012	**BRGWC-29I**	Water	02/14/18 14:06	02/15/18 15:45
261915013	**BRGWC-30I**	Water	02/14/18 15:03	02/15/18 15:45
261915014	**BRGWC-30I**	Water	02/14/18 15:03	02/15/18 15:45
261915015	**BRGWC-32S**	Water	02/14/18 15:08	02/15/18 15:45
261915016	**BRGWC-32S**	Water	02/14/18 15:08	02/15/18 15:45
261915017	**FB-1**	Water	02/14/18 08:38	02/15/18 15:45
261915018	**FB-1**	Water	02/14/18 08:38	02/15/18 15:45
261915019	**RB-1**	Water	02/14/18 08:47	02/15/18 15:45
261915020	**RB-1**	Water	02/14/18 08:47	02/15/18 15:45
261915021	**Dup-1**	Water	02/14/18 00:00	02/15/18 15:45
261915022	**Dup-1**	Water	02/14/18 00:00	02/15/18 15:45
261915023	**Rad-1**	Water	02/14/18 13:20	02/15/18 15:45

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 261915

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
261915001	**BRGWA-12S**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915002	**BRGWA-12S**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915003	**BRGWA-12I**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915004	**BRGWA-12I**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915005	**BRGWA-23S**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915006	**BRGWA-23S**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915007	**BRGWC-25I**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915008	**BRGWC-25I**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915009	**BRGWC-27I**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915010	**BRGWC-27I**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915011	**BRGWC-29I**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 261915

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915012	**BRGWC-29I**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915013	**BRGWC-30I**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915014	**BRGWC-30I**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915015	**BRGWC-32S**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915016	**BRGWC-32S**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915017	**FB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915018	**FB-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915019	**RB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
261915020	**RB-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915021	**Dup-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 261915

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
261915022	**Dup-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
261915023	**Rad-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWA-12S **Lab ID: 261915001** Collected: 02/14/18 09:06 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 20:38	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 20:38	7440-38-2	
Barium	**60.3**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 20:38	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 20:38	7440-41-7	
Boron	ND	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 20:38	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 20:38	7440-43-9	
Calcium	ND	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 20:44	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 20:38	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 20:38	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 20:38	7439-92-1	
Lithium	ND	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 20:38	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 20:38	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 20:38	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 20:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 18:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**138**	mg/L	25.0	25.0	1		02/20/18 15:14		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.5**	mg/L	0.25	0.024	1		02/19/18 18:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 18:55	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		02/19/18 18:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWA-12I **Lab ID: 261915003** Collected: 02/14/18 11:20 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 20:50	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 20:50	7440-38-2	
Barium	**78.6**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 20:50	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 20:50	7440-41-7	
Boron	**6.8J**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 20:50	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 20:50	7440-43-9	
Calcium	ND	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 20:56	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 20:50	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 20:50	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 20:50	7439-92-1	
Lithium	**3.8J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 20:50	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 20:50	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 20:50	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 20:50	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.052J**	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**137**	mg/L	25.0	25.0	1		02/20/18 00:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.1**	mg/L	0.25	0.024	1		02/19/18 19:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 19:16	16984-48-8	
Sulfate	**2.1J**	mg/L	1.0	0.017	1		02/19/18 19:16	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWA-23S **Lab ID: 261915005** Collected: 02/14/18 12:05 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 21:01	7440-36-0	
Arsenic	**0.70J**	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 21:01	7440-38-2	
Barium	**129**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 21:01	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 21:01	7440-41-7	
Boron	**31.4J**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 21:01	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 21:01	7440-43-9	
Calcium	ND	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 21:07	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 21:01	7440-47-3	
Cobalt	**13.5**	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 21:01	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 21:01	7439-92-1	
Lithium	**10.4J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 21:01	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 21:01	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 21:01	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 21:01	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:04	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**194**	mg/L	25.0	25.0	1		02/20/18 00:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.8**	mg/L	0.25	0.024	1		02/19/18 19:38	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 19:38	16984-48-8	
Sulfate	**82.2**	mg/L	10.0	0.17	10		02/22/18 05:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-25I **Lab ID: 261915007** Collected: 02/14/18 13:18 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 21:13	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 21:13	7440-38-2	
Barium	**32.7**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 21:13	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 21:13	7440-41-7	
Boron	**1470**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 21:13	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 21:13	7440-43-9	
Calcium	**58800**	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 21:19	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 21:13	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 21:13	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 21:13	7439-92-1	
Lithium	ND	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 21:13	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 21:13	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 21:13	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 21:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:07	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**431**	mg/L	25.0	25.0	1		02/20/18 00:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.7**	mg/L	0.25	0.024	1		02/19/18 21:24	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 21:24	16984-48-8	
Sulfate	**260**	mg/L	25.0	0.42	25		03/02/18 15:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-27I **Lab ID: 261915009** Collected: 02/14/18 13:20 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 21:36	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 21:36	7440-38-2	
Barium	**16.6**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 21:36	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 21:36	7440-41-7	
Boron	**1170**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 21:36	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 21:36	7440-43-9	
Calcium	**74100**	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 21:41	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 21:36	7440-47-3	
Cobalt	**11.2**	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 21:36	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 21:36	7439-92-1	
Lithium	**1.8J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 21:36	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 21:36	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 21:36	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 21:36	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**503**	mg/L	25.0	25.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	0.25	0.024	1		02/19/18 21:45	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 21:45	16984-48-8	
Sulfate	**232**	mg/L	20.0	0.34	20		02/27/18 05:16	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-29I **Lab ID: 261915011** Collected: 02/14/18 14:06 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 21:47	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 21:47	7440-38-2	
Barium	**16.3**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 21:47	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 21:47	7440-41-7	
Boron	**1800**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 21:47	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 21:47	7440-43-9	
Calcium	**72100**	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 21:53	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 21:47	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 21:47	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 21:47	7439-92-1	
Lithium	**3.4J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 21:47	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 21:47	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 21:47	7782-49-2	
Thallium	**0.18J**	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 21:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**487**	mg/L	25.0	25.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.2**	mg/L	0.25	0.024	1		02/19/18 22:27	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 22:27	16984-48-8	
Sulfate	**280**	mg/L	20.0	0.34	20		02/27/18 05:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-30I **Lab ID: 261915013** Collected: 02/14/18 15:03 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 21:59	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 21:59	7440-38-2	
Barium	**23.6**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 21:59	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 21:59	7440-41-7	
Boron	**1470**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 21:59	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 21:59	7440-43-9	
Calcium	**62800**	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 22:04	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 21:59	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 21:59	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 21:59	7439-92-1	
Lithium	**11.5J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 21:59	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 21:59	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 21:59	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 21:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**448**	mg/L	25.0	25.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.9**	mg/L	0.25	0.024	1		02/19/18 22:48	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 22:48	16984-48-8	
Sulfate	**250**	mg/L	20.0	0.34	20		02/27/18 05:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-32S **Lab ID: 261915015** Collected: 02/14/18 15:08 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 22:10	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 22:10	7440-38-2	
Barium	**41.7**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 22:10	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 22:10	7440-41-7	
Boron	**1600**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 22:10	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 22:10	7440-43-9	
Calcium	**70200**	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 22:16	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 22:10	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 22:10	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 22:10	7439-92-1	
Lithium	**2.3J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 22:10	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 22:10	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 22:10	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 22:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:21	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**628**	mg/L	50.0	50.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.4**	mg/L	0.25	0.024	1		02/19/18 23:09	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 23:09	16984-48-8	
Sulfate	**383**	mg/L	20.0	0.34	20		02/27/18 06:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: FB-1 **Lab ID: 261915017** Collected: 02/14/18 08:38 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 22:21	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 22:21	7440-38-2	
Barium	ND	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 22:21	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 22:21	7440-41-7	
Boron	ND	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 22:21	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 22:21	7440-43-9	
Calcium	ND	ug/L	500	40.4	1	02/19/18 11:27	02/20/18 22:21	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 22:21	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 22:21	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 22:21	7439-92-1	
Lithium	ND	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 22:21	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 22:21	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 22:21	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 22:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		02/19/18 23:31	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 23:31	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		02/19/18 23:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: RB-1 **Lab ID: 261915019** Collected: 02/14/18 08:47 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 22:27	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 22:27	7440-38-2	
Barium	ND	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 22:27	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 22:27	7440-41-7	
Boron	ND	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 22:27	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 22:27	7440-43-9	
Calcium	ND	ug/L	500	40.4	1	02/19/18 11:27	02/20/18 22:27	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 22:27	7440-47-3	
Cobalt	ND	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 22:27	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 22:27	7439-92-1	
Lithium	ND	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 22:27	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 22:27	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 22:27	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 22:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		02/19/18 23:52	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/19/18 23:52	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		02/19/18 23:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 261915

Sample: Dup-1 **Lab ID: 261915021** Collected: 02/14/18 00:00 Received: 02/15/18 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.60	1	02/19/18 11:27	02/20/18 22:44	7440-36-0	
Arsenic	ND	ug/L	5.0	0.52	1	02/19/18 11:27	02/20/18 22:44	7440-38-2	
Barium	**16.1**	ug/L	10.0	0.42	1	02/19/18 11:27	02/20/18 22:44	7440-39-3	
Beryllium	ND	ug/L	3.0	0.091	1	02/19/18 11:27	02/20/18 22:44	7440-41-7	
Boron	**1140**	ug/L	40.0	6.0	1	02/19/18 11:27	02/20/18 22:44	7440-42-8	
Cadmium	ND	ug/L	1.0	0.14	1	02/19/18 11:27	02/20/18 22:44	7440-43-9	
Calcium	**73100**	ug/L	25000	2020	50	02/19/18 11:27	02/20/18 22:50	7440-70-2	
Chromium	ND	ug/L	10.0	0.45	1	02/19/18 11:27	02/20/18 22:44	7440-47-3	
Cobalt	**10.3**	ug/L	10.0	0.26	1	02/19/18 11:27	02/20/18 22:44	7440-48-4	
Lead	ND	ug/L	5.0	0.067	1	02/19/18 11:27	02/20/18 22:44	7439-92-1	
Lithium	**1.7J**	ug/L	50.0	1.5	1	02/19/18 11:27	02/20/18 22:44	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.0	1	02/19/18 11:27	02/20/18 22:44	7439-98-7	
Selenium	ND	ug/L	10.0	1.8	1	02/19/18 11:27	02/20/18 22:44	7782-49-2	
Thallium	ND	ug/L	1.0	0.052	1	02/19/18 11:27	02/20/18 22:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	02/23/18 15:10	02/23/18 19:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**405**	mg/L	25.0	25.0	1		02/20/18 15:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	0.25	0.024	1		02/20/18 00:13	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/20/18 00:13	16984-48-8	
Sulfate	**240**	mg/L	20.0	0.34	20		02/27/18 06:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 1555 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 261915001, 261915003, 261915005, 261915007, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

METHOD BLANK: 9256 Matrix: Water
Associated Lab Samples: 261915001, 261915003, 261915005, 261915007, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.036	02/23/18 18:48	

LABORATORY CONTROL SAMPLE: 9257

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 9258 9259

Parameter	Units	261915001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.6	2.6	103	104	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 1219 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 261915001, 261915003, 261915005, 261915007, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

METHOD BLANK: 7863 Matrix: Water
Associated Lab Samples: 261915001, 261915003, 261915005, 261915007, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	3.0	0.60	02/20/18 19:18	
Arsenic	ug/L	ND	5.0	0.52	02/20/18 19:18	
Barium	ug/L	ND	10.0	0.42	02/20/18 19:18	
Beryllium	ug/L	ND	3.0	0.091	02/20/18 19:18	
Boron	ug/L	ND	40.0	6.0	02/20/18 19:18	
Cadmium	ug/L	ND	1.0	0.14	02/20/18 19:18	
Calcium	ug/L	ND	500	40.4	02/20/18 19:18	
Chromium	ug/L	ND	10.0	0.45	02/20/18 19:18	
Cobalt	ug/L	ND	10.0	0.26	02/20/18 19:18	
Lead	ug/L	ND	5.0	0.067	02/20/18 19:18	
Lithium	ug/L	ND	50.0	1.5	02/20/18 19:18	
Molybdenum	ug/L	ND	10.0	1.0	02/20/18 19:18	
Selenium	ug/L	ND	10.0	1.8	02/20/18 19:18	
Thallium	ug/L	ND	1.0	0.052	02/20/18 19:18	

LABORATORY CONTROL SAMPLE: 7864

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	109	109	80-120	
Arsenic	ug/L	100	99.7	100	80-120	
Barium	ug/L	100	100	100	80-120	
Beryllium	ug/L	100	105	105	80-120	
Boron	ug/L	1000	1060	106	80-120	
Cadmium	ug/L	100	103	103	80-120	
Calcium	ug/L	1000	1060	106	80-120	
Chromium	ug/L	100	103	103	80-120	
Cobalt	ug/L	100	105	105	80-120	
Lead	ug/L	100	105	105	80-120	
Lithium	ug/L	100	104	104	80-120	
Molybdenum	ug/L	100	102	102	80-120	
Selenium	ug/L	100	99.0	99	80-120	
Thallium	ug/L	100	105	105	80-120	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 261915

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 7884 7885

Parameter	Units	261937001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	118	112	118	112	75-125	5	20	
Arsenic	ug/L	ND	100	100	104	107	104	107	75-125	2	20	
Barium	ug/L	39.6	100	100	145	140	105	101	75-125	3	20	
Beryllium	ug/L	ND	100	100	94.8	95.9	95	96	75-125	1	20	
Boron	ug/L	ND	1000	1000	963	968	96	96	75-125	1	20	
Cadmium	ug/L	ND	100	100	107	108	107	108	75-125	1	20	
Calcium	ug/L	33800	1000	1000	33400	31900	-48	-194	75-125	4	20	M6
Chromium	ug/L	11.0	100	100	119	119	108	108	75-125	0	20	
Cobalt	ug/L	ND	100	100	108	107	108	107	75-125	0	20	
Lead	ug/L	ND	100	100	102	105	102	104	75-125	2	20	
Lithium	ug/L	ND	100	100	96.6	99.0	96	98	75-125	2	20	
Molybdenum	ug/L	ND	100	100	107	106	107	106	75-125	1	20	
Selenium	ug/L	ND	100	100	100	107	98	105	75-125	7	20	
Thallium	ug/L	ND	100	100	103	104	103	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 398762 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 261915003, 261915005, 261915007

METHOD BLANK: 2211764 Matrix: Water
Associated Lab Samples: 261915003, 261915005, 261915007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/20/18 00:04	

LABORATORY CONTROL SAMPLE: 2211765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	270	108	90-110	

SAMPLE DUPLICATE: 2211766

Parameter	Units	261862012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	411	401	2	5	

SAMPLE DUPLICATE: 2211767

Parameter	Units	92373829005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	105	103	2	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 398871 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 261915001, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

METHOD BLANK: 2212368 Matrix: Water
Associated Lab Samples: 261915001, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/20/18 15:14	

LABORATORY CONTROL SAMPLE: 2212369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	258	103	90-110	

SAMPLE DUPLICATE: 2212370

Parameter	Units	261915001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	138	120	14	5	D6

SAMPLE DUPLICATE: 2212371

Parameter	Units	92373456002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	131	128	2	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 1216 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 261915001, 261915003, 261915005, 261915007, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

METHOD BLANK: 7854 Matrix: Water
Associated Lab Samples: 261915001, 261915003, 261915005, 261915007, 261915009, 261915011, 261915013, 261915015, 261915017, 261915019, 261915021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	02/19/18 15:02	
Fluoride	mg/L	ND	0.30	0.029	02/19/18 15:02	
Sulfate	mg/L	ND	1.0	0.017	02/19/18 15:02	

LABORATORY CONTROL SAMPLE: 7855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10	100	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 7856 7857

Parameter	Units	261843001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.3	10	10	12.3	12.3	101	100	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.9	9.9	99	99	90-110	0	15	
Sulfate	mg/L	ND	10	10	10.7	10.7	101	101	90-110	0	15	

MATRIX SPIKE SAMPLE: 7858

Parameter	Units	261843003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4.7	10	14.3	96	90-110	
Fluoride	mg/L	ND	10	10	100	90-110	
Sulfate	mg/L	6.6	10	16.5	99	90-110	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWA-12S **Lab ID: 261915002** Collected: 02/14/18 09:06 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.251 ± 0.173 (0.261) C:90% T:NA**	pCi/L	03/01/18 10:27	13982-63-3	
Radium-228	EPA 9320	**0.286 ± 0.370 (0.789) C:82% T:76%**	pCi/L	03/02/18 15:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.537 ± 0.543 (1.05)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWA-12I **Lab ID: 261915004** Collected: 02/14/18 11:20 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.473 ± 0.227 (0.264) C:88% T:NA**	pCi/L	03/01/18 10:27	13982-63-3	
Radium-228	EPA 9320	**0.655 ± 0.433 (0.835) C:80% T:81%**	pCi/L	03/02/18 15:31	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.660 (1.10)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWA-23S **Lab ID: 261915006** Collected: 02/14/18 12:05 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.577 ± 0.273 (0.372) C:86% T:NA**	pCi/L	03/01/18 10:27	13982-63-3	
Radium-228	EPA 9320	**0.624 ± 0.451 (0.882) C:81% T:71%**	pCi/L	03/02/18 15:31	15262-20-1	
Total Radium	Total Radium Calculation	**1.20 ± 0.724 (1.25)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-25I **Lab ID: 261915008** Collected: 02/14/18 13:18 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.663 ± 0.276 (0.311) C:87% T:NA**	pCi/L	03/01/18 10:12	13982-63-3	
Radium-228	EPA 9320	**0.751 ± 0.405 (0.722) C:77% T:84%**	pCi/L	03/02/18 15:32	15262-20-1	
Total Radium	Total Radium Calculation	**1.41 ± 0.681 (1.03)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-27I **Lab ID: 261915010** Collected: 02/14/18 13:20 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.505 ± 0.248 (0.337) C:87% T:NA**	pCi/L	03/01/18 10:12	13982-63-3	
Radium-228	EPA 9320	**0.673 ± 0.551 (1.11) C:76% T:76%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.18 ± 0.799 (1.45)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-29I **Lab ID: 261915012** Collected: 02/14/18 14:06 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.391 ± 0.216 (0.290) C:87% T:NA**	pCi/L	03/01/18 10:12	13982-63-3	
Radium-228	EPA 9320	**1.50 ± 0.647 (1.05) C:69% T:74%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.89 ± 0.863 (1.34)**	pCi/L	03/09/18 12:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-30I **Lab ID: 261915014** Collected: 02/14/18 15:03 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.532 ± 0.271 (0.402) C:86% T:NA**	pCi/L	03/01/18 10:12	13982-63-3	
Radium-228	EPA 9320	**0.604 ± 0.484 (0.963) C:72% T:79%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.755 (1.37)**	pCi/L	03/09/18 12:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: BRGWC-32S **Lab ID: 261915016** Collected: 02/14/18 15:08 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.417 ± 0.232 (0.339) C:87% T:NA**	pCi/L	03/01/18 10:12	13982-63-3	
Radium-228	EPA 9320	**1.25 ± 0.598 (1.02) C:71% T:76%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.67 ± 0.830 (1.36)**	pCi/L	03/09/18 12:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: FB-1 **Lab ID: 261915018** Collected: 02/14/18 08:38 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.259 ± 0.174 (0.248) C:89% T:NA**	pCi/L	03/01/18 10:34	13982-63-3	
Radium-228	EPA 9320	**0.600 ± 0.487 (0.975) C:75% T:83%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.859 ± 0.661 (1.22)**	pCi/L	03/09/18 12:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: RB-1 **Lab ID: 261915020** Collected: 02/14/18 08:47 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.337 ± 0.226 (0.370) C:87% T:NA**	pCi/L	03/01/18 10:13	13982-63-3	
Radium-228	EPA 9320	**-0.123 ± 0.444 (1.06) C:71% T:79%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.337 ± 0.670 (1.43)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: Dup-1 **Lab ID: 261915022** Collected: 02/14/18 00:00 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.386 ± 0.211 (0.287) C:88% T:NA**	pCi/L	03/01/18 10:15	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.569 (1.03) C:69% T:75%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.40 ± 0.780 (1.32)**	pCi/L	03/09/18 12:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

Sample: Rad-1 **Lab ID: 261915023** Collected: 02/14/18 13:20 Received: 02/15/18 15:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.544 ± 0.252 (0.305) C:84% T:NA**	pCi/L	03/01/18 10:16	13982-63-3	
Radium-228	EPA 9320	**1.03 ± 0.580 (1.05) C:69% T:73%**	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.57 ± 0.832 (1.36)**	pCi/L	03/09/18 12:44	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 289268 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 261915008, 261915010, 261915012, 261915014, 261915016, 261915018, 261915020, 261915022, 261915023

METHOD BLANK: 1417374 Matrix: Water
Associated Lab Samples: 261915008, 261915010, 261915012, 261915014, 261915016, 261915018, 261915020, 261915022, 261915023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.206 ± 0.148 (0.216) C:92% T:NA	pCi/L	03/01/18 10:12	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 289271 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 261915010, 261915012, 261915014, 261915016, 261915018, 261915020, 261915022, 261915023

METHOD BLANK: 1417377 Matrix: Water
Associated Lab Samples: 261915010, 261915012, 261915014, 261915016, 261915018, 261915020, 261915022, 261915023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.557 ± 0.408 (0.796) C:80% T:87%	pCi/L	03/06/18 13:23	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 289267 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 261915002, 261915004, 261915006

METHOD BLANK: 1417373 Matrix: Water
Associated Lab Samples: 261915002, 261915004, 261915006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0779 ± 0.131 (0.292) C:87% T:NA	pCi/L	03/01/18 08:44	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 261915

QC Batch: 289270 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 261915002, 261915004, 261915006, 261915008

METHOD BLANK: 1417376 Matrix: Water
Associated Lab Samples: 261915002, 261915004, 261915006, 261915008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.103 ± 0.234 (0.520) C:83% T:87%	pCi/L	03/02/18 11:18	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Branch
Pace Project No.: 261915

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.

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-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 261915

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
261915001	BRGWA-12S	EPA 3005A	1219	EPA 6020B	1264
261915003	BRGWA-12I	EPA 3005A	1219	EPA 6020B	1264
261915005	BRGWA-23S	EPA 3005A	1219	EPA 6020B	1264
261915007	BRGWC-25I	EPA 3005A	1219	EPA 6020B	1264
261915009	BRGWC-27I	EPA 3005A	1219	EPA 6020B	1264
261915011	BRGWC-29I	EPA 3005A	1219	EPA 6020B	1264
261915013	BRGWC-30I	EPA 3005A	1219	EPA 6020B	1264
261915015	BRGWC-32S	EPA 3005A	1219	EPA 6020B	1264
261915017	FB-1	EPA 3005A	1219	EPA 6020B	1264
261915019	RB-1	EPA 3005A	1219	EPA 6020B	1264
261915021	Dup-1	EPA 3005A	1219	EPA 6020B	1264
261915001	BRGWA-12S	EPA 7470A	1555	EPA 7470A	1573
261915003	BRGWA-12I	EPA 7470A	1555	EPA 7470A	1573
261915005	BRGWA-23S	EPA 7470A	1555	EPA 7470A	1573
261915007	BRGWC-25I	EPA 7470A	1555	EPA 7470A	1573
261915009	BRGWC-27I	EPA 7470A	1555	EPA 7470A	1573
261915011	BRGWC-29I	EPA 7470A	1555	EPA 7470A	1573
261915013	BRGWC-30I	EPA 7470A	1555	EPA 7470A	1573
261915015	BRGWC-32S	EPA 7470A	1555	EPA 7470A	1573
261915017	FB-1	EPA 7470A	1555	EPA 7470A	1573
261915019	RB-1	EPA 7470A	1555	EPA 7470A	1573
261915021	Dup-1	EPA 7470A	1555	EPA 7470A	1573
261915002	BRGWA-12S	EPA 9315	289267		
261915004	BRGWA-12I	EPA 9315	289267		
261915006	BRGWA-23S	EPA 9315	289267		
261915008	BRGWC-25I	EPA 9315	289268		
261915010	BRGWC-27I	EPA 9315	289268		
261915012	BRGWC-29I	EPA 9315	289268		
261915014	BRGWC-30I	EPA 9315	289268		
261915016	BRGWC-32S	EPA 9315	289268		
261915018	FB-1	EPA 9315	289268		
261915020	RB-1	EPA 9315	289268		
261915022	Dup-1	EPA 9315	289268		
261915023	Rad-1	EPA 9315	289268		
261915002	BRGWA-12S	EPA 9320	289270		
261915004	BRGWA-12I	EPA 9320	289270		
261915006	BRGWA-23S	EPA 9320	289270		
261915008	BRGWC-25I	EPA 9320	289270		
261915010	BRGWC-27I	EPA 9320	289271		
261915012	BRGWC-29I	EPA 9320	289271		
261915014	BRGWC-30I	EPA 9320	289271		
261915016	BRGWC-32S	EPA 9320	289271		
261915018	FB-1	EPA 9320	289271		
261915020	RB-1	EPA 9320	289271		
261915022	Dup-1	EPA 9320	289271		
261915023	Rad-1	EPA 9320	289271		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 261915

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
261915002	**BRGWA-12S**	Total Radium Calculation	290643		
261915004	**BRGWA-12I**	Total Radium Calculation	290643		
261915006	**BRGWA-23S**	Total Radium Calculation	290643		
261915008	**BRGWC-25I**	Total Radium Calculation	290643		
261915010	**BRGWC-27I**	Total Radium Calculation	290643		
261915012	**BRGWC-29I**	Total Radium Calculation	290643		
261915014	**BRGWC-30I**	Total Radium Calculation	290643		
261915016	**BRGWC-32S**	Total Radium Calculation	290643		
261915018	**FB-1**	Total Radium Calculation	290643		
261915020	**RB-1**	Total Radium Calculation	290643		
261915022	**Dup-1**	Total Radium Calculation	290643		
261915023	**Rad-1**	Total Radium Calculation	290643		
261915001	**BRGWA-12S**	SM 2540C	398871		
261915003	**BRGWA-12I**	SM 2540C	398762		
261915005	**BRGWA-23S**	SM 2540C	398762		
261915007	**BRGWC-25I**	SM 2540C	398762		
261915009	**BRGWC-27I**	SM 2540C	398871		
261915011	**BRGWC-29I**	SM 2540C	398871		
261915013	**BRGWC-30I**	SM 2540C	398871		
261915015	**BRGWC-32S**	SM 2540C	398871		
261915017	**FB-1**	SM 2540C	398871		
261915019	**RB-1**	SM 2540C	398871		
261915021	**Dup-1**	SM 2540C	398871		
261915001	**BRGWA-12S**	EPA 300.0	1216		
261915003	**BRGWA-12I**	EPA 300.0	1216		
261915005	**BRGWA-23S**	EPA 300.0	1216		
261915007	**BRGWC-25I**	EPA 300.0	1216		
261915009	**BRGWC-27I**	EPA 300.0	1216		
261915011	**BRGWC-29I**	EPA 300.0	1216		
261915013	**BRGWC-30I**	EPA 300.0	1216		
261915015	**BRGWC-32S**	EPA 300.0	1216		
261915017	**FB-1**	EPA 300.0	1216		
261915019	**RB-1**	EPA 300.0	1216		
261915021	**Dup-1**	EPA 300.0	1216		

CHAIN OF COUSTODY RECORD

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 31085 Atlanta, GA 30303 P. 404-506-7239

REPORT TO: Joju Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: [email]@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

	CONTAINER TYPE:	P	P	P
	PRESERVATION:	3	7	3
	# of CONTAINERS	Metals App III (EPA 6010/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 & 228 (SW-846 9315/9320)

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III	TDS, Cl, F, SO4	Radium 226 & 228	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
2-14-18	0906	GW		G	BRGWA-12S	5	1	2	2	1/2	
2-14-18	1120	GW		G	BRGWA-12I	5	1	2	2	3/4	
2-14-18	1205	GW		G	BRGWA-23S	5	1	2	2	5/6	
2-14-18	1318	GW		G	BRGWC-25I	5	1	2	2	7/8	
2-14-18	1320	GW		G	BRGWC-27I	5	1	2	2	9/10	
2-14-18	1406	GW		G	BRGWC-29I	5	1	2	2	11/12	
2-14-18	1503	GW		G	BRGWC-30I	5	1	2	2	13/14	
2-14-18	1508	GW		G	BRGWC-32S	5	1	2	2	15/16	
2-14-18	0838	W		G	FB-1	5	1	2	2	17/18	
2-14-18	0347	W		G	RB-1	5	1	2	2	19/20	
2-14-18	—	GW		G	DUP-1	5	1	2	2	21/22	
2-14-18	1320	GW		G	Rad-1	2			2	23	

SAMPLED BY AND TITLE: William Ballew / Geologist	DATE/TIME: 2-14-18 / 1600
RELINQUISHED BY: William Ballew	DATE/TIME: 2-15-18/1200
RECEIVED BY:	DATE/TIME:
RELINQUISHED BY:	DATE/TIME:
RECEIVED BY LAB: M Zalliman	DATE/TIME: 02/15/18 1545
SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER circled) CLIENT OTHER	# of Coolers:
pH checked: (Yes circled) No NA	Ice: (Yes circled) No NA
Temperature: Min: 0.2 Max:	Custody Seal: (Intact circled) Broken Not Present N/A
Cooler ID:	

CONTAINER TYPE
- P - PLASTIC
- A - AMBER GLASS
- G - CLEAR GLASS
- V - VOA VIAL
- S - STERILE
- O - OTHER

PRESERVATION
- 1 - HCl, ≤6°C
- 2 - H_2SO_4, ≤6°C
- 3 - HNO_3
- 4 - NaOH, ≤6°C
- 5 - NaOH/ZnAc, ≤6°C
- 6 - $Na_2S_2O_3$, ≤6°C
- 7 - ≤6°C not frozen

*MATRIX CODES:
- DW - DRINKING WATER
- WW - WASTEWATER
- GW - GROUNDWATER
- SW - SURFACE WATER
- ST - STORM WATER
- W - WATER
- S - SOIL
- SL - SLUDGE
- SD - SOLID
- A - AIR
- L - LIQUID
- P - PRODUCT

WO# : 261915

261915

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 261915

PM: BM Due Date: 02/22/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other

Tracking #:

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 6.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 2/15/18 MR

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

LABORATORY ANALYTICAL DATA

March 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 30, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 262514

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 262514

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Asheville Certification IDs

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 262514

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262514001	**PZ-44**	Water	03/06/18 10:50	03/06/18 18:00
262514002	**PZ-44**	Water	03/06/18 10:50	03/06/18 18:00
262514003	**PZ-45**	Water	03/06/18 13:25	03/06/18 18:00
262514004	**PZ-45**	Water	03/06/18 13:25	03/06/18 18:00
262514005	**PZ-46**	Water	03/06/18 10:55	03/06/18 18:00
262514006	**PZ-46**	Water	03/06/18 10:55	03/06/18 18:00
262514007	**PZ-47**	Water	03/06/18 12:45	03/06/18 18:00
262514008	**PZ-47**	Water	03/06/18 12:45	03/06/18 18:00
262514009	**FD-1**	Water	03/06/18 00:00	03/06/18 18:00
262514010	**FD-1**	Water	03/06/18 00:00	03/06/18 18:00
262514011	**EB-1**	Water	03/06/18 13:40	03/06/18 18:00
262514012	**EB-1**	Water	03/06/18 13:40	03/06/18 18:00
262514013	**FB-1**	Water	03/06/18 11:05	03/06/18 18:00
262514014	**FB-1**	Water	03/06/18 11:05	03/06/18 18:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 262514

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262514001	**PZ-44**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514002	**PZ-44**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262514003	**PZ-45**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514004	**PZ-45**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262514005	**PZ-46**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514006	**PZ-46**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262514007	**PZ-47**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514008	**PZ-47**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262514009	**FD-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514010	**FD-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262514011	**EB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 262514

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514012	**EB-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262514013	**FB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262514014	**FB-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-44 **Lab ID: 262514001** Collected: 03/06/18 10:50 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 18:34	7440-36-0	
Arsenic	**0.82J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 18:34	7440-38-2	
Barium	**46.1**	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 18:34	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 18:34	7440-41-7	
Boron	**2120**	ug/L	2000	197	50	03/07/18 10:35	03/07/18 18:40	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 18:34	7440-43-9	
Calcium	ND	ug/L	25000	685	50	03/07/18 10:35	03/07/18 18:40	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 18:34	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 18:34	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 18:34	7439-92-1	
Lithium	**4.6J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 18:34	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 18:34	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 18:34	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 18:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**191**	mg/L	25.0	25.0	1		03/12/18 22:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.0**	mg/L	0.25	0.024	1		03/08/18 14:37	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/08/18 14:37	16984-48-8	
Sulfate	**51.8**	mg/L	10.0	0.17	10		03/14/18 01:13	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-45 **Lab ID: 262514003** Collected: 03/06/18 13:25 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 18:46	7440-36-0	
Arsenic	**1.8J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 18:46	7440-38-2	
Barium	**100**	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 18:46	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 18:46	7440-41-7	
Boron	**19.8J**	ug/L	40.0	3.9	1	03/07/18 10:35	03/07/18 18:46	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 18:46	7440-43-9	
Calcium	**39500**	ug/L	25000	685	50	03/07/18 10:35	03/07/18 18:51	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 18:46	7440-47-3	
Cobalt	**16.2**	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 18:46	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 18:46	7439-92-1	
Lithium	**3.1J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 18:46	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 18:46	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 18:46	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 18:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**346**	mg/L	25.0	25.0	1		03/12/18 22:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**56.6**	mg/L	2.5	0.24	10		03/14/18 01:34	16887-00-6	
Fluoride	**0.94**	mg/L	0.30	0.029	1		03/08/18 15:44	16984-48-8	
Sulfate	**111**	mg/L	10.0	0.17	10		03/14/18 01:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-46 **Lab ID: 262514005** Collected: 03/06/18 10:55 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 19:09	7440-36-0	
Arsenic	**2.0J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 19:09	7440-38-2	
Barium	**159**	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 19:09	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 19:09	7440-41-7	
Boron	**9.6J**	ug/L	40.0	3.9	1	03/07/18 10:35	03/07/18 19:09	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 19:09	7440-43-9	
Calcium	**105000**	ug/L	25000	685	50	03/07/18 10:35	03/07/18 19:14	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 19:09	7440-47-3	
Cobalt	**25.5**	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 19:09	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 19:09	7439-92-1	
Lithium	**11.2J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 19:09	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 19:09	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 19:09	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 19:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1080**	mg/L	125	125	1		03/12/18 22:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**326**	mg/L	5.0	0.48	20		03/14/18 03:17	16887-00-6	
Fluoride	**0.50**	mg/L	0.30	0.029	1		03/08/18 16:06	16984-48-8	
Sulfate	**260**	mg/L	20.0	0.34	20		03/14/18 03:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-47 **Lab ID: 262514007** Collected: 03/06/18 12:45 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 19:20	7440-36-0	
Arsenic	**2.5J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 19:20	7440-38-2	
Barium	**51.9**	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 19:20	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 19:20	7440-41-7	
Boron	**428**	ug/L	40.0	3.9	1	03/07/18 10:35	03/07/18 19:20	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 19:20	7440-43-9	
Calcium	**326000**	ug/L	125000	3430	250	03/07/18 10:35	03/08/18 18:08	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 19:20	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 19:20	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 19:20	7439-92-1	
Lithium	**39.9J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 19:20	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 19:20	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 19:20	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 19:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:20	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2200**	mg/L	125	125	1		03/12/18 22:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.4**	mg/L	0.25	0.024	1		03/08/18 16:29	16887-00-6	
Fluoride	**1.1**	mg/L	0.30	0.029	1		03/08/18 16:29	16984-48-8	
Sulfate	**1560**	mg/L	100	1.7	100		03/14/18 03:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: FD-1 **Lab ID: 262514009** Collected: 03/06/18 00:00 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 19:31	7440-36-0	
Arsenic	**0.86J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 19:31	7440-38-2	
Barium	**46.8**	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 19:31	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 19:31	7440-41-7	
Boron	**1540**	ug/L	400	39.5	10	03/07/18 10:35	03/08/18 18:14	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 19:31	7440-43-9	
Calcium	**21900**	ug/L	5000	137	10	03/07/18 10:35	03/08/18 18:14	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 19:31	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 19:31	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 19:31	7439-92-1	
Lithium	**4.4J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 19:31	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 19:31	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 19:31	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 19:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**192**	mg/L	25.0	25.0	1		03/12/18 22:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.0**	mg/L	0.25	0.024	1		03/08/18 16:51	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/08/18 16:51	16984-48-8	
Sulfate	**47.5J**	mg/L	10.0	0.17	10		03/14/18 03:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: EB-1 **Lab ID: 262514011** Collected: 03/06/18 13:40 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 19:49	7440-36-0	
Arsenic	**0.65J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 19:49	7440-38-2	
Barium	ND	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 19:49	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 19:49	7440-41-7	
Boron	ND	ug/L	40.0	3.9	1	03/07/18 10:35	03/07/18 19:49	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 19:49	7440-43-9	
Calcium	ND	ug/L	500	13.7	1	03/07/18 10:35	03/07/18 19:49	7440-70-2	B
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 19:49	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 19:49	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 19:49	7439-92-1	
Lithium	ND	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 19:49	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 19:49	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 19:49	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 19:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/12/18 22:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		03/08/18 17:13	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/08/18 17:13	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/08/18 17:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262514

Sample: FB-1 **Lab ID: 262514013** Collected: 03/06/18 11:05 Received: 03/06/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/07/18 19:54	7440-36-0	
Arsenic	**0.89J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/07/18 19:54	7440-38-2	
Barium	ND	ug/L	10.0	0.78	1	03/07/18 10:35	03/07/18 19:54	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/07/18 19:54	7440-41-7	
Boron	ND	ug/L	40.0	3.9	1	03/07/18 10:35	03/07/18 19:54	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/07/18 19:54	7440-43-9	
Calcium	ND	ug/L	500	13.7	1	03/07/18 10:35	03/07/18 19:54	7440-70-2	B
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/07/18 19:54	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/07/18 19:54	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/07/18 19:54	7439-92-1	
Lithium	ND	ug/L	50.0	0.97	1	03/07/18 10:35	03/07/18 19:54	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/07/18 19:54	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/07/18 19:54	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/07/18 19:54	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.036	1	03/12/18 11:15	03/12/18 17:25	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/12/18 21:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		03/08/18 17:36	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/08/18 17:36	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/08/18 17:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 1882 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011, 262514013

METHOD BLANK: 10597 Matrix: Water
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011, 262514013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.036	03/12/18 16:13	

LABORATORY CONTROL SAMPLE: 10598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11862 11863

Parameter	Units	262357001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.3	2.3	93	93	75-125	0	20	

SAMPLE DUPLICATE: 11806

Parameter	Units	261274003 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	ug/L	0.052J	0.050J		20	H1

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 2137 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011, 262514013

METHOD BLANK: 11618 Matrix: Water
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011, 262514013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	3.0	0.78	03/07/18 16:41	
Arsenic	ug/L	ND	5.0	0.57	03/07/18 16:41	
Barium	ug/L	ND	10.0	0.78	03/07/18 16:41	
Beryllium	ug/L	ND	3.0	0.050	03/07/18 16:41	
Boron	ug/L	ND	40.0	3.9	03/07/18 16:41	
Cadmium	ug/L	ND	1.0	0.093	03/07/18 16:41	
Calcium	ug/L	ND	500	13.7	03/07/18 16:41	
Chromium	ug/L	ND	10.0	1.6	03/07/18 16:41	
Cobalt	ug/L	ND	10.0	0.52	03/07/18 16:41	
Lead	ug/L	ND	5.0	0.27	03/07/18 16:41	
Lithium	ug/L	ND	50.0	0.97	03/07/18 16:41	
Molybdenum	ug/L	ND	10.0	1.9	03/07/18 16:41	
Selenium	ug/L	ND	10.0	1.4	03/07/18 16:41	
Thallium	ug/L	ND	1.0	0.14	03/07/18 16:41	

LABORATORY CONTROL SAMPLE: 11619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	98.2	98	80-120	
Arsenic	ug/L	100	99.5	99	80-120	
Barium	ug/L	100	94.9	95	80-120	
Beryllium	ug/L	100	110	110	80-120	
Boron	ug/L	1000	1090	109	80-120	
Cadmium	ug/L	100	99.6	100	80-120	
Calcium	ug/L	1000	1030	103	80-120	
Chromium	ug/L	100	99.1	99	80-120	
Cobalt	ug/L	100	99.4	99	80-120	
Lead	ug/L	100	100	100	80-120	
Lithium	ug/L	100	115	115	80-120	
Molybdenum	ug/L	100	102	102	80-120	
Selenium	ug/L	100	99.9	100	80-120	
Thallium	ug/L	100	98.2	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11620 11621

Parameter	Units	262357013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	103	102	103	102	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262514

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11620 11621

Parameter	Units	262357013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.1J	100	100	106	105	105	104	75-125	1	20	
Barium	ug/L	17.1	100	100	116	115	99	98	75-125	1	20	
Beryllium	ug/L	ND	100	100	102	99.5	99	97	75-125	3	20	
Boron	ug/L	918	1000	1000	2620	2620	171	171	75-125	0	20	
Cadmium	ug/L	ND	100	100	100	103	100	103	75-125	3	20	
Calcium	ug/L	45100	1000	1000	45500	45500	38	42	75-125	0	20	M6
Chromium	ug/L	ND	100	100	98.9	97.0	99	97	75-125	2	20	
Cobalt	ug/L	16.7	100	100	119	118	102	101	75-125	0	20	
Lead	ug/L	ND	100	100	97.0	97.2	97	97	75-125	0	20	
Lithium	ug/L	12.2J	100	100	115	112	103	100	75-125	3	20	
Molybdenum	ug/L	ND	100	100	110	110	110	110	75-125	0	20	
Selenium	ug/L	ND	100	100	105	105	104	104	75-125	0	20	
Thallium	ug/L	ND	100	100	97.1	96.7	97	97	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 401636 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011

METHOD BLANK: 2227835 Matrix: Water
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/12/18 22:34	

LABORATORY CONTROL SAMPLE: 2227836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	242	97	90-110	

SAMPLE DUPLICATE: 2227837

Parameter	Units	92375821008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	269	267	1	5	

SAMPLE DUPLICATE: 2227838

Parameter	Units	92375943001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	97.0	95.0	2	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 401638 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262514013

METHOD BLANK: 2227843 Matrix: Water
Associated Lab Samples: 262514013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	2.5	2.5	03/12/18 21:28	

LABORATORY CONTROL SAMPLE: 2227844

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	244	98	90-110	

SAMPLE DUPLICATE: 2227845

Parameter	Units	262514013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		5	

SAMPLE DUPLICATE: 2227846

Parameter	Units	92376063002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	218	207	5	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 2226 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011, 262514013

METHOD BLANK: 12137 Matrix: Water
Associated Lab Samples: 262514001, 262514003, 262514005, 262514007, 262514009, 262514011, 262514013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	03/08/18 13:07	
Fluoride	mg/L	ND	0.30	0.029	03/08/18 13:07	
Sulfate	mg/L	ND	1.0	0.017	03/08/18 13:07	

LABORATORY CONTROL SAMPLE: 12138

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	9.7	97	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 12139 12140

Parameter	Units	262514001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.0	10	10	15.2	15.3	92	93	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.3	10.4	103	104	90-110	1	15	
Sulfate	mg/L	51.8	10	10	54.6	54.6	28	28	90-110	0	15	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-44 **Lab ID: 262514002** Collected: 03/06/18 10:50 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.377 ± 0.246 (0.366) C:84% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**0.200 ± 0.303 (0.654) C:84% T:81%**	pCi/L	03/26/18 15:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.577 ± 0.549 (1.02)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-45 **Lab ID: 262514004** Collected: 03/06/18 13:25 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.455 ± 0.351 (0.617) C:61% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**0.792 ± 0.422 (0.732) C:71% T:82%**	pCi/L	03/26/18 15:47	15262-20-1	
Total Radium	Total Radium Calculation	**1.25 ± 0.773 (1.35)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-46 **Lab ID: 262514006** Collected: 03/06/18 10:55 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.849 ± 0.363 (0.435) C:90% T:NA**	pCi/L	03/14/18 10:17	13982-63-3	
Radium-228	EPA 9320	**0.0286 ± 0.358 (0.829) C:75% T:80%**	pCi/L	03/26/18 15:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.878 ± 0.721 (1.26)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: PZ-47 **Lab ID: 262514008** Collected: 03/06/18 12:45 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.950 ± 0.417 (0.505) C:71% T:NA**	pCi/L	03/14/18 10:17	13982-63-3	
Radium-228	EPA 9320	**0.798 ± 0.428 (0.773) C:77% T:86%**	pCi/L	03/27/18 14:58	15262-20-1	
Total Radium	Total Radium Calculation	**1.75 ± 0.845 (1.28)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: FD-1 **Lab ID: 262514010** Collected: 03/06/18 00:00 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.516 ± 0.385 (0.683) C:58% T:NA**	pCi/L	03/14/18 10:17	13982-63-3	
Radium-228	EPA 9320	**0.398 ± 0.354 (0.716) C:73% T:89%**	pCi/L	03/27/18 14:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.914 ± 0.739 (1.40)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: EB-1 **Lab ID: 262514012** Collected: 03/06/18 13:40 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0684 ± 0.211 (0.516) C:76% T:NA**	pCi/L	03/14/18 10:16	13982-63-3	
Radium-228	EPA 9320	**0.154 ± 0.405 (0.903) C:75% T:75%**	pCi/L	03/27/18 14:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.222 ± 0.616 (1.42)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

Sample: FB-1 **Lab ID: 262514014** Collected: 03/06/18 11:05 Received: 03/06/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.278 ± 0.166 (0.269) C:87% T:NA**	pCi/L	03/22/18 18:34	13982-63-3	
Radium-228	EPA 9320	**0.346 ± 0.408 (0.862) C:77% T:81%**	pCi/L	03/27/18 14:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.624 ± 0.574 (1.13)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 292046 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262514014

METHOD BLANK: 1429290 Matrix: Water
Associated Lab Samples: 262514014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.361 ± 0.163 (0.205) C:93% T:NA	pCi/L	03/22/18 18:34	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 290897 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262514002, 262514004

METHOD BLANK: 1424476 Matrix: Water
Associated Lab Samples: 262514002, 262514004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.259 ± 0.235 (0.428) C:79% T:NA	pCi/L	03/14/18 08:37	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 291249 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262514002, 262514004, 262514006, 262514008, 262514010, 262514012, 262514014

METHOD BLANK: 1425571 Matrix: Water
Associated Lab Samples: 262514002, 262514004, 262514006, 262514008, 262514010, 262514012, 262514014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.247 ± 0.304 (0.638) C:75% T:80%	pCi/L	03/26/18 15:46	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262514

QC Batch: 290896 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262514006, 262514008, 262514010, 262514012

METHOD BLANK: 1424475 Matrix: Water
Associated Lab Samples: 262514006, 262514008, 262514010, 262514012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.418 ± 0.284 (0.409) C:64% T:NA	pCi/L	03/14/18 10:13	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Branch
Pace Project No.: 262514

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.

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-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 262514

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262514001	PZ-44	EPA 3005A	2137	EPA 6020B	2184
262514003	PZ-45	EPA 3005A	2137	EPA 6020B	2184
262514005	PZ-46	EPA 3005A	2137	EPA 6020B	2184
262514007	PZ-47	EPA 3005A	2137	EPA 6020B	2184
262514009	FD-1	EPA 3005A	2137	EPA 6020B	2184
262514011	EB-1	EPA 3005A	2137	EPA 6020B	2184
262514013	FB-1	EPA 3005A	2137	EPA 6020B	2184
262514001	PZ-44	EPA 7470A	1882	EPA 7470A	2413
262514003	PZ-45	EPA 7470A	1882	EPA 7470A	2413
262514005	PZ-46	EPA 7470A	1882	EPA 7470A	2413
262514007	PZ-47	EPA 7470A	1882	EPA 7470A	2413
262514009	FD-1	EPA 7470A	1882	EPA 7470A	2413
262514011	EB-1	EPA 7470A	1882	EPA 7470A	2413
262514013	FB-1	EPA 7470A	1882	EPA 7470A	2413
262514002	PZ-44	EPA 9315	290897		
262514004	PZ-45	EPA 9315	290897		
262514006	PZ-46	EPA 9315	290896		
262514008	PZ-47	EPA 9315	290896		
262514010	FD-1	EPA 9315	290896		
262514012	EB-1	EPA 9315	290896		
262514014	FB-1	EPA 9315	292046		
262514002	PZ-44	EPA 9320	291249		
262514004	PZ-45	EPA 9320	291249		
262514006	PZ-46	EPA 9320	291249		
262514008	PZ-47	EPA 9320	291249		
262514010	FD-1	EPA 9320	291249		
262514012	EB-1	EPA 9320	291249		
262514014	FB-1	EPA 9320	291249		
262514002	PZ-44	Total Radium Calculation	292811		
262514004	PZ-45	Total Radium Calculation	292811		
262514006	PZ-46	Total Radium Calculation	292811		
262514008	PZ-47	Total Radium Calculation	292811		
262514010	FD-1	Total Radium Calculation	292811		
262514012	EB-1	Total Radium Calculation	292811		
262514014	FB-1	Total Radium Calculation	292811		
262514001	PZ-44	SM 2540C	401636		
262514003	PZ-45	SM 2540C	401636		
262514005	PZ-46	SM 2540C	401636		
262514007	PZ-47	SM 2540C	401636		
262514009	FD-1	SM 2540C	401636		
262514011	EB-1	SM 2540C	401636		
262514013	FB-1	SM 2540C	401638		
262514001	PZ-44	EPA 300.0	2226		
262514003	PZ-45	EPA 300.0	2226		

REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 262514

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262514005	**PZ-46**	EPA 300.0	2226		
262514007	**PZ-47**	EPA 300.0	2226		
262514009	**FD-1**	EPA 300.0	2226		
262514011	**EB-1**	EPA 300.0	2226		
262514013	**FB-1**	EPA 300.0	2226		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham (jabraham@southernco.com)

CC: Dawn Prell (dawn_prell@golder.com)
Rachel Kirkman (rachel_kirkman@golder.com)

REQUESTED COMPLETION DATE: 48 hour for Metals & TDS, F,Cl,S

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of COntainers	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/8320)	TDS
	CONTAINER TYPE:						P	P	P	
	PRESERVATION						3	7	3	
03/06/18	1050	GW		x	PZ-44	5	1	1	2	1
03/06/18	1325	GW		x	PZ-45	7	1	1	4	1
03/06/18	1055	GW		x	PZ-46	5	1	1	2	1
03/06/18	1245	GW		x	PZ-47	5	1	1	2	1
03/06/18	—	GW		x	FD-1	5	1	1	2	1
03/06/18	1340	W		x	EB-1	5	1	1	2	1
03/06/18	1105	W		x	FB-1	5	1	1	2	1

LAB NUMBER

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

Extra Radium

↳ Cl, F, S

Rush analysis for Metals & TDS - 48hr TAT

Standard TAT for Radium

SAMPLED BY AND TITLE: Karim Minkara Field Lead

DATE/TIME:

RELINQUISHED BY: [signature]

DATE/TIME: 3-6-18 1755

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: [signature]

DATE/TIME: 03/06/18 1800

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA

Ice: Yes No NA

Temperature: Min: 1.2 Max

Custody Seal: Intact Broken Not Present

# of Coolers

Cooler ID:

WO# : 262514

262514

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 262514

PM: BM Due Date: 03/14/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 3/6/18 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 10, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 262928

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 262928

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pennsylvania Certification IDs

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
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

Asheville Certification IDs

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 262928

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262928001	**PZ-50**	Water	03/15/18 13:55	03/15/18 18:00
262928002	**PZ-50**	Water	03/15/18 13:55	03/15/18 18:00
262928003	**FD-1**	Water	03/15/18 00:00	03/15/18 18:00
262928004	**FD-1**	Water	03/15/18 00:00	03/15/18 18:00

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 262928

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262928001	**PZ-50**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262928002	**PZ-50**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262928003	**FD-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262928004	**FD-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262928

Sample: PZ-50 **Lab ID: 262928001** Collected: 03/15/18 13:55 Received: 03/15/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	3.0	0.00078	1	03/19/18 09:50	03/19/18 18:52	7440-36-0	
Arsenic	**0.0014J**	mg/L	0.0050	0.00057	1	03/19/18 09:50	03/19/18 18:52	7440-38-2	
Barium	ND	mg/L	10.0	0.00078	1	03/19/18 09:50	03/19/18 18:52	7440-39-3	
Beryllium	ND	mg/L	3.0	0.000050	1	03/19/18 09:50	03/19/18 18:52	7440-41-7	
Boron	**0.32**	mg/L	0.040	0.0039	1	03/19/18 09:50	03/19/18 18:52	7440-42-8	
Cadmium	ND	mg/L	1.0	0.000093	1	03/19/18 09:50	03/19/18 18:52	7440-43-9	
Calcium	ND	mg/L	25000	0.69	50	03/19/18 09:50	03/19/18 18:58	7440-70-2	M6
Chromium	ND	mg/L	10.0	0.0016	1	03/19/18 09:50	03/19/18 18:52	7440-47-3	
Cobalt	ND	mg/L	500	0.026	50	03/19/18 09:50	03/19/18 18:58	7440-48-4	M1
Lead	ND	mg/L	5.0	0.00027	1	03/19/18 09:50	03/19/18 18:52	7439-92-1	
Lithium	**0.038J**	mg/L	0.050	0.00097	1	03/19/18 09:50	03/19/18 18:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/19/18 09:50	03/19/18 18:52	7439-98-7	
Selenium	ND	mg/L	10.0	0.0014	1	03/19/18 09:50	03/19/18 18:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/18 09:50	03/19/18 18:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	03/17/18 14:40	03/18/18 14:14	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2440**	mg/L	125	125	1		03/19/18 18:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.3**	mg/L	0.25	0.024	1		03/22/18 10:16	16887-00-6	
Fluoride	**0.84**	mg/L	0.30	0.029	1		03/17/18 06:26	16984-48-8	
Sulfate	**1590**	mg/L	50.0	0.85	50		03/22/18 10:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 262928

Sample: FD-1 **Lab ID: 262928003** Collected: 03/15/18 00:00 Received: 03/15/18 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	3.0	0.00078	1	03/19/18 09:50	03/19/18 19:43	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00057	1	03/19/18 09:50	03/19/18 19:43	7440-38-2	
Barium	ND	mg/L	10.0	0.00078	1	03/19/18 09:50	03/19/18 19:43	7440-39-3	
Beryllium	ND	mg/L	3.0	0.000050	1	03/19/18 09:50	03/19/18 19:43	7440-41-7	
Boron	**0.32**	mg/L	0.040	0.0039	1	03/19/18 09:50	03/19/18 19:43	7440-42-8	
Cadmium	ND	mg/L	1.0	0.000093	1	03/19/18 09:50	03/19/18 19:43	7440-43-9	
Calcium	ND	mg/L	25000	0.69	50	03/19/18 09:50	03/19/18 19:49	7440-70-2	
Chromium	ND	mg/L	10.0	0.0016	1	03/19/18 09:50	03/19/18 19:43	7440-47-3	
Cobalt	ND	mg/L	500	0.026	50	03/19/18 09:50	03/19/18 19:49	7440-48-4	
Lead	ND	mg/L	5.0	0.00027	1	03/19/18 09:50	03/19/18 19:43	7439-92-1	
Lithium	**0.038J**	mg/L	0.050	0.00097	1	03/19/18 09:50	03/19/18 19:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/19/18 09:50	03/19/18 19:43	7439-98-7	
Selenium	ND	mg/L	10.0	0.0014	1	03/19/18 09:50	03/19/18 19:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/18 09:50	03/19/18 19:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	03/17/18 14:40	03/18/18 14:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2460**	mg/L	125	125	1		03/19/18 18:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.4**	mg/L	0.25	0.024	1		03/22/18 11:01	16887-00-6	
Fluoride	**0.48**	mg/L	0.30	0.029	1		03/17/18 06:48	16984-48-8	
Sulfate	**1610**	mg/L	50.0	0.85	50		03/22/18 11:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262928

QC Batch: 2725 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 262928001, 262928003

METHOD BLANK: 14428 Matrix: Water
Associated Lab Samples: 262928001, 262928003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000036	03/18/18 14:09	

LABORATORY CONTROL SAMPLE: 14429

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 14475 14476

Parameter	Units	262928001 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	.0025	.0025	0.0020	0.0020	81	81	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262928

QC Batch: 2745 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 262928001, 262928003

METHOD BLANK: 14542 Matrix: Water
Associated Lab Samples: 262928001, 262928003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	3.0	0.00078	03/19/18 18:40	
Arsenic	mg/L	ND	0.0050	0.00057	03/19/18 18:40	
Barium	mg/L	ND	10.0	0.00078	03/19/18 18:40	
Beryllium	mg/L	ND	3.0	0.000050	03/19/18 18:40	
Boron	mg/L	ND	0.040	0.0039	03/19/18 18:40	
Cadmium	mg/L	ND	1.0	0.000093	03/19/18 18:40	
Calcium	mg/L	ND	500	0.014	03/19/18 18:40	
Chromium	mg/L	ND	10.0	0.0016	03/19/18 18:40	
Cobalt	mg/L	ND	10.0	0.00052	03/19/18 18:40	
Lead	mg/L	ND	5.0	0.00027	03/19/18 18:40	
Lithium	mg/L	ND	0.050	0.00097	03/19/18 18:40	
Molybdenum	mg/L	ND	0.010	0.0019	03/19/18 18:40	
Selenium	mg/L	ND	10.0	0.0014	03/19/18 18:40	
Thallium	mg/L	ND	0.0010	0.00014	03/19/18 18:40	

LABORATORY CONTROL SAMPLE: 14543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	.11J	108	80-120	
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	.1J	101	80-120	
Beryllium	mg/L	.1	.11J	111	80-120	
Boron	mg/L	1	1.1	112	80-120	
Cadmium	mg/L	.1	.11J	108	80-120	
Calcium	mg/L	1	1J	102	80-120	
Chromium	mg/L	.1	.11J	109	80-120	
Cobalt	mg/L	.1	.11J	106	80-120	
Lead	mg/L	.1	.1J	103	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.11	111	80-120	
Selenium	mg/L	.1	.1J	104	80-120	
Thallium	mg/L	.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 14544 14545

Parameter	Units	262928001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	.11J	.11J	106	108	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262928

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 14544 14545

Parameter	Units	262928001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0014J	.1	.1	0.11	0.11	110	110	75-125	0	20	
Barium	mg/L	ND	.1	.1	.13J	.13J	106	109	75-125	2	20	
Beryllium	mg/L	ND	.1	.1	.087J	.087J	85	84	75-125	1	20	
Boron	mg/L	0.32	1	1	1.2	1.2	87	89	75-125	2	20	
Cadmium	mg/L	ND	.1	.1	.15J	.14J	109	104	75-125	4	20	
Calcium	mg/L	ND	1	1	248J	246J	1460	1260	75-125	1	20	M6
Chromium	mg/L	ND	.1	.1	.11J	.11J	111	110	75-125	1	20	
Cobalt	mg/L	ND	.1	.1	1.5J	1.5J	240	255	75-125	1	20	M1
Lead	mg/L	ND	.1	.1	.097J	.095J	96	95	75-125	1	20	
Lithium	mg/L	0.038J	.1	.1	0.13	0.12	89	87	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.12	114	116	75-125	2	20	
Selenium	mg/L	ND	.1	.1	.12J	.12J	118	116	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262928

QC Batch: 402612 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262928001, 262928003

METHOD BLANK: 2233183 Matrix: Water
Associated Lab Samples: 262928001, 262928003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/19/18 18:19	

LABORATORY CONTROL SAMPLE: 2233184

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	254	102	90-110	

SAMPLE DUPLICATE: 2233185

Parameter	Units	262928001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2440	2460	1	5	

SAMPLE DUPLICATE: 2233186

Parameter	Units	92376814002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	155	154	1	5	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 262928

QC Batch: 2695
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262928001, 262928003

METHOD BLANK: 14190 Matrix: Water
Associated Lab Samples: 262928001, 262928003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	03/17/18 02:27	
Fluoride	mg/L	ND	0.30	0.029	03/17/18 02:27	
Sulfate	mg/L	ND	1.0	0.017	03/17/18 02:27	

LABORATORY CONTROL SAMPLE: 14191

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	10.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 14192 14193

Parameter	Units	262779001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.1	10	10	11.3	11.3	102	102	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.3	10.2	103	102	90-110	0	15	
Sulfate	mg/L	ND	10	10	10.3	10.4	99	100	90-110	0	15	

MATRIX SPIKE SAMPLE: 14194

Parameter	Units	262779002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	3.2	10	12.9	97	90-110	
Fluoride	mg/L	ND	10	10.3	103	90-110	
Sulfate	mg/L	8.2	10	17.5	93	90-110	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262928

Sample: PZ-50 **Lab ID: 262928002** Collected: 03/15/18 13:55 Received: 03/15/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.562 ± 0.288 (0.379) C:91% T:NA**	pCi/L	03/30/18 08:59	13982-63-3	
Radium-228	EPA 9320	**0.746 ± 0.349 (0.582) C:78% T:97%**	pCi/L	04/05/18 10:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.637 (0.961)**	pCi/L	04/10/18 13:59	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262928

Sample: FD-1 **Lab ID: 262928004** Collected: 03/15/18 00:00 Received: 03/15/18 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.514 ± 0.280 (0.405) C:91% T:NA**	pCi/L	03/30/18 09:00	13982-63-3	
Radium-228	EPA 9320	**1.53 ± 0.455 (0.536) C:84% T:92%**	pCi/L	04/05/18 10:50	15262-20-1	
Total Radium	Total Radium Calculation	**2.04 ± 0.735 (0.941)**	pCi/L	04/10/18 13:59	7440-14-4	

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(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262928

QC Batch: 292855 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262928002, 262928004

METHOD BLANK: 1433160 Matrix: Water
Associated Lab Samples: 262928002, 262928004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.169 ± 0.181 (0.348) C:86% T:NA	pCi/L	03/30/18 08:58	

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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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 262928

QC Batch: 292856 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262928002, 262928004

METHOD BLANK: 1433161 Matrix: Water
Associated Lab Samples: 262928002, 262928004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.218 ± 0.303 (0.648) C:81% T:79%	pCi/L	04/05/18 10:49	

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

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 262928

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.

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-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 262928

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262928001	**PZ-50**	EPA 3005A	2745	EPA 6020B	2801
262928003	**FD-1**	EPA 3005A	2745	EPA 6020B	2801
262928001	**PZ-50**	EPA 7470A	2725	EPA 7470A	2735
262928003	**FD-1**	EPA 7470A	2725	EPA 7470A	2735
262928002	**PZ-50**	EPA 9315	292855		
262928004	**FD-1**	EPA 9315	292855		
262928002	**PZ-50**	EPA 9320	292856		
262928004	**FD-1**	EPA 9320	292856		
262928002	**PZ-50**	Total Radium Calculation	294162		
262928004	**FD-1**	Total Radium Calculation	294162		
262928001	**PZ-50**	SM 2540C	402612		
262928003	**FD-1**	SM 2540C	402612		
262928001	**PZ-50**	EPA 300.0	2695		
262928003	**FD-1**	EPA 300.0	2695		

CHAIN OF CUSTODY RECORD

Pace Analytical®
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Rachel Kirkman (Rachel_Kirkman@golder.com)
CC: Dawn Prell (Dawn_Prell@golder.com)

REQUESTED COMPLETION DATE: Rush analysis - 48hr
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 (EPA 300.0)	Radium 226 & 228 (SW-846 9315/9320)	TDS (SM2540C)						LAB NUMBER
CONTAINER TYPE:								P	P	P	P						
PRESERVATION:								3	7	3	7						
03/15/18	1355	GW		X	PZ-50	5		1	1	2	1						
03/15/18	—	GW		X	FD-1	5		1	1	2	1						

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 262928

262928

SAMPLED BY AND TITLE: Karim Minkara Field Lead
DATE/TIME:
RELINQUISHED BY:
DATE/TIME: 3-15-18 1800

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Rahman
DATE/TIME: 03/15/18 1800
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 3.3 Max:
Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

COC

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 262928

PM: BM Due Date: 03/20/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used 803 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.3 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/15/18 MR

Temp should be above freezing to 6°C

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

LABORATORY ANALYTICAL DATA

May 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

May 13, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 264546

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 264546

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Asheville Certification IDs

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, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 264546

Lab ID	Sample ID	Matrix	Date Collected	Date Received
264546001	**PZ-44**	Water	05/01/18 13:55	05/02/18 10:35
264546002	**PZ-45**	Water	05/01/18 15:30	05/02/18 10:35
264546003	**PZ-46**	Water	05/01/18 16:50	05/02/18 10:35
264546004	**PZ-47**	Water	05/01/18 12:35	05/02/18 10:35
264546005	**PZ-48**	Water	05/01/18 14:05	05/02/18 10:35
264546006	**PZ-49**	Water	05/01/18 16:25	05/02/18 10:35
264546007	**PZ-50**	Water	05/01/18 19:20	05/02/18 10:35
264546008	**FD-1**	Water	05/01/18 00:00	05/02/18 10:35
264546009	**EB-1**	Water	05/01/18 18:30	05/02/18 10:35
264546010	**FB-1**	Water	05/01/18 14:20	05/02/18 10:35

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 264546

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
264546001	**PZ-44**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546002	**PZ-45**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546003	**PZ-46**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546004	**PZ-47**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546005	**PZ-48**	EPA 6020B	CSW, KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546006	**PZ-49**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546007	**PZ-50**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546008	**FD-1**	EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546009	**EB-1**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
264546010	**FB-1**	EPA 6020B	KLH	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 264546

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-44 **Lab ID: 264546001** Collected: 05/01/18 13:55 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 18:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 18:27	7440-38-2	
Barium	**0.052**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 18:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 18:27	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 18:27	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 18:27	7440-43-9	
Calcium	ND	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 18:32	7440-70-2	D3,M6
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 18:27	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 18:27	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 18:27	7439-92-1	
Lithium	**0.0049J**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 18:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 18:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 18:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 18:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 13:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**189**	mg/L	25.0	25.0	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.0**	mg/L	0.25	0.024	1		05/04/18 16:18	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		05/04/18 16:18	16984-48-8	
Sulfate	**51.0**	mg/L	5.0	0.085	5		05/08/18 23:39	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-45 **Lab ID: 264546002** Collected: 05/01/18 15:30 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 19:18	7440-36-0	
Arsenic	**0.0021J**	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 19:18	7440-38-2	
Barium	**0.084**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 19:18	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 19:18	7440-41-7	
Boron	**0.015J**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 19:18	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 19:18	7440-43-9	
Calcium	**45.5**	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 19:24	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 19:18	7440-47-3	
Cobalt	**0.015**	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 19:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 19:18	7439-92-1	
Lithium	**0.0038J**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 19:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 19:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 19:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 19:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:21	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**374**	mg/L	25.0	25.0	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**58.5**	mg/L	2.5	0.24	10		05/09/18 00:01	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		05/04/18 17:22	16984-48-8	
Sulfate	**112**	mg/L	10.0	0.17	10		05/09/18 00:01	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-46 **Lab ID: 264546003** Collected: 05/01/18 16:50 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 19:30	7440-36-0	
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 19:30	7440-38-2	
Barium	**0.083**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 19:30	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 19:30	7440-41-7	
Boron	**0.0059J**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 19:30	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 19:30	7440-43-9	
Calcium	**110**	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 19:35	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 19:30	7440-47-3	
Cobalt	**0.016**	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 19:30	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 19:30	7439-92-1	
Lithium	**0.013J**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 19:30	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 19:30	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 19:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 19:30	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1230**	mg/L	50.0	50.0	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**372**	mg/L	2.5	0.24	10		05/09/18 00:22	16887-00-6	
Fluoride	**0.83**	mg/L	0.30	0.029	1		05/04/18 17:43	16984-48-8	
Sulfate	**273**	mg/L	10.0	0.17	10		05/09/18 00:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-47 **Lab ID: 264546004** Collected: 05/01/18 12:35 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 19:41	7440-36-0	
Arsenic	**0.0016J**	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 19:41	7440-38-2	
Barium	**0.049**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 19:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 19:41	7440-41-7	
Boron	**0.45**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 19:41	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 19:41	7440-43-9	
Calcium	**305**	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 19:47	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 19:41	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 19:41	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 19:41	7439-92-1	
Lithium	**0.044J**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 19:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 19:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 19:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 19:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2080**	mg/L	125	125	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		05/04/18 18:04	16887-00-6	
Fluoride	**0.89**	mg/L	0.30	0.029	1		05/04/18 18:04	16984-48-8	
Sulfate	**1560**	mg/L	50.0	0.85	50		05/09/18 00:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-48 **Lab ID: 264546005** Collected: 05/01/18 14:05 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 19:52	7440-36-0	
Arsenic	**0.0020J**	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 19:52	7440-38-2	
Barium	**0.065**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 19:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 19:52	7440-41-7	
Boron	**0.42**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 19:52	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 19:52	7440-43-9	
Calcium	**299**	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 19:58	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 19:52	7440-47-3	
Cobalt	**0.015**	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 19:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 19:52	7439-92-1	
Lithium	**0.051**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/09/18 12:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 19:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 19:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 19:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2080**	mg/L	125	125	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	0.25	0.024	1		05/04/18 18:25	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		05/04/18 18:25	16984-48-8	
Sulfate	**1370**	mg/L	50.0	0.85	50		05/09/18 01:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-49 **Lab ID: 264546006** Collected: 05/01/18 16:25 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 20:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 20:04	7440-38-2	
Barium	**0.040**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 20:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 20:04	7440-41-7	
Boron	**0.038J**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 20:04	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 20:04	7440-43-9	
Calcium	**9.8**	mg/L	0.50	0.014	1	05/04/18 11:30	05/07/18 20:04	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 20:04	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 20:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 20:04	7439-92-1	
Lithium	**0.011J**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 20:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 20:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 20:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 20:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**122**	mg/L	25.0	25.0	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.8**	mg/L	0.25	0.024	1		05/04/18 18:46	16887-00-6	
Fluoride	**0.41**	mg/L	0.30	0.029	1		05/04/18 18:46	16984-48-8	
Sulfate	**47.0**	mg/L	1.0	0.017	1		05/04/18 18:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: PZ-50 **Lab ID: 264546007** Collected: 05/01/18 19:20 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 20:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 20:27	7440-38-2	
Barium	**0.024**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 20:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 20:27	7440-41-7	
Boron	**0.32**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 20:27	7440-42-8	
Cadmium	**0.011**	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 20:27	7440-43-9	
Calcium	**225**	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 20:32	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 20:27	7440-47-3	
Cobalt	**1.4**	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 20:27	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 20:27	7439-92-1	
Lithium	**0.042J**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 20:27	7439-93-2	
Molybdenum	**0.0022J**	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 20:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 20:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 20:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2190**	mg/L	125	125	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.4**	mg/L	0.25	0.024	1		05/04/18 19:08	16887-00-6	
Fluoride	**0.91**	mg/L	0.30	0.029	1		05/04/18 19:08	16984-48-8	
Sulfate	**1550**	mg/L	50.0	0.85	50		05/09/18 01:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: FD-1 **Lab ID: 264546008** Collected: 05/01/18 00:00 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 20:38	7440-36-0	
Arsenic	**0.0018J**	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 20:38	7440-38-2	
Barium	**0.063**	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 20:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 20:38	7440-41-7	
Boron	**0.41**	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 20:38	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 20:38	7440-43-9	
Calcium	**281**	mg/L	25.0	0.69	50	05/04/18 11:30	05/07/18 20:44	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 20:38	7440-47-3	
Cobalt	**0.014**	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 20:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 20:38	7439-92-1	
Lithium	**0.052**	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 20:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 20:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 20:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 20:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2110**	mg/L	125	125	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.4**	mg/L	0.25	0.024	1		05/04/18 19:29	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		05/04/18 19:29	16984-48-8	
Sulfate	**1410**	mg/L	50.0	0.85	50		05/09/18 01:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: EB-1 **Lab ID: 264546009** Collected: 05/01/18 18:30 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 20:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 20:49	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 20:49	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 20:49	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 20:49	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 20:49	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	05/04/18 11:30	05/07/18 20:49	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 20:49	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 20:49	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 20:49	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 20:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 20:49	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 20:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 20:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:38	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		05/04/18 21:15	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		05/04/18 21:15	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		05/04/18 21:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 264546

Sample: FB-1 **Lab ID: 264546010** Collected: 05/01/18 14:20 Received: 05/02/18 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/04/18 11:30	05/07/18 20:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	05/04/18 11:30	05/07/18 20:55	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	05/04/18 11:30	05/07/18 20:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	05/04/18 11:30	05/07/18 20:55	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	05/04/18 11:30	05/07/18 20:55	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	05/04/18 11:30	05/07/18 20:55	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	05/04/18 11:30	05/07/18 20:55	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	05/04/18 11:30	05/07/18 20:55	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	05/04/18 11:30	05/07/18 20:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	05/04/18 11:30	05/07/18 20:55	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	05/04/18 11:30	05/07/18 20:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	05/04/18 11:30	05/07/18 20:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	05/04/18 11:30	05/07/18 20:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	05/04/18 11:30	05/07/18 20:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	05/03/18 09:31	05/03/18 14:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		05/07/18 16:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		05/04/18 21:36	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		05/04/18 21:36	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		05/04/18 21:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 264546

QC Batch: 5404 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

METHOD BLANK: 26179 Matrix: Water
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000036	05/03/18 13:53	

LABORATORY CONTROL SAMPLE: 26180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0023	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 26188 26189

Parameter	Units	264546001 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	.0025	.0025	0.0022	0.0020	87	82	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 264546

QC Batch: 5525 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

METHOD BLANK: 26623 Matrix: Water
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	05/07/18 18:15	
Arsenic	mg/L	ND	0.0050	0.00057	05/07/18 18:15	
Barium	mg/L	ND	0.010	0.00078	05/07/18 18:15	
Beryllium	mg/L	ND	0.0030	0.000050	05/07/18 18:15	
Boron	mg/L	ND	0.040	0.0039	05/07/18 18:15	
Cadmium	mg/L	ND	0.0010	0.000093	05/07/18 18:15	
Calcium	mg/L	ND	0.50	0.014	05/07/18 18:15	
Chromium	mg/L	ND	0.010	0.0016	05/07/18 18:15	
Cobalt	mg/L	ND	0.010	0.00052	05/07/18 18:15	
Lead	mg/L	ND	0.0050	0.00027	05/07/18 18:15	
Lithium	mg/L	ND	0.050	0.00097	05/07/18 18:15	
Molybdenum	mg/L	ND	0.010	0.0019	05/07/18 18:15	
Selenium	mg/L	ND	0.010	0.0014	05/07/18 18:15	
Thallium	mg/L	ND	0.0010	0.00014	05/07/18 18:15	

LABORATORY CONTROL SAMPLE: 26624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	103	80-120	
Arsenic	mg/L	.1	0.10	101	80-120	
Barium	mg/L	.1	0.10	102	80-120	
Beryllium	mg/L	.1	0.11	110	80-120	
Boron	mg/L	1	1.1	108	80-120	
Cadmium	mg/L	.1	0.10	103	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.10	101	80-120	
Selenium	mg/L	.1	0.099	99	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 264546

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 26941 26942

Parameter	Units	264546001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.10	0.10	104	105	75-125	1	20	
Arsenic	mg/L	ND	.1	.1	0.10	0.10	101	103	75-125	2	20	
Barium	mg/L	0.052	.1	.1	0.16	0.16	111	110	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.11	0.11	107	107	75-125	0	20	
Boron	mg/L	1.5	1	1	2.5	2.4	98	97	75-125	1	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20	
Calcium	mg/L	ND	1	1	23.6J	22.8J	93	4	75-125	4	20	M6
Chromium	mg/L	ND	.1	.1	0.11	0.11	109	105	75-125	3	20	
Cobalt	mg/L	ND	.1	.1	0.11	0.10	106	102	75-125	3	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20	
Lithium	mg/L	0.0049J	.1	.1	0.11	0.11	108	107	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	105	104	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 264546

QC Batch: 409600 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

METHOD BLANK: 2272319 Matrix: Water
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	05/07/18 16:31	

LABORATORY CONTROL SAMPLE: 2272320

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	256	102	90-110	

SAMPLE DUPLICATE: 2272321

Parameter	Units	92383066018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		5	

SAMPLE DUPLICATE: 2272322

Parameter	Units	264546008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2110	2060	2	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 264546

QC Batch: 5559 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

METHOD BLANK: 26754 Matrix: Water
Associated Lab Samples: 264546001, 264546002, 264546003, 264546004, 264546005, 264546006, 264546007, 264546008, 264546009, 264546010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	05/04/18 15:35	
Fluoride	mg/L	ND	0.30	0.029	05/04/18 15:35	
Sulfate	mg/L	ND	1.0	0.017	05/04/18 15:35	

LABORATORY CONTROL SAMPLE: 26755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.5	105	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 26756 26757

Parameter	Units	264546001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.0	10	10	15.4	15.5	94	95	90-110	1	15	
Fluoride	mg/L	ND	10	10	10.0	10.2	100	102	90-110	2	15	
Sulfate	mg/L	51.0	10	10	57.2	57.3	61	63	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 26758

Parameter	Units	264546002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	58.5	10	53.7	-48	90-110	E,M1
Fluoride	mg/L	ND	10	10.6	106	90-110	
Sulfate	mg/L	112	10	105	-74	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 264546

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.

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.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 264546

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
264546001	**PZ-44**	EPA 3005A	5525	EPA 6020B	5676
264546002	**PZ-45**	EPA 3005A	5525	EPA 6020B	5676
264546003	**PZ-46**	EPA 3005A	5525	EPA 6020B	5676
264546004	**PZ-47**	EPA 3005A	5525	EPA 6020B	5676
264546005	**PZ-48**	EPA 3005A	5525	EPA 6020B	5676
264546006	**PZ-49**	EPA 3005A	5525	EPA 6020B	5676
264546007	**PZ-50**	EPA 3005A	5525	EPA 6020B	5676
264546009	**EB-1**	EPA 3005A	5525	EPA 6020B	5676
264546010	**FB-1**	EPA 3005A	5525	EPA 6020B	5676
264546001	**PZ-44**	EPA 7470A	5404	EPA 7470A	5466
264546002	**PZ-45**	EPA 7470A	5404	EPA 7470A	5466
264546003	**PZ-46**	EPA 7470A	5404	EPA 7470A	5466
264546004	**PZ-47**	EPA 7470A	5404	EPA 7470A	5466
264546005	**PZ-48**	EPA 7470A	5404	EPA 7470A	5466
264546006	**PZ-49**	EPA 7470A	5404	EPA 7470A	5466
264546007	**PZ-50**	EPA 7470A	5404	EPA 7470A	5466
264546008	**FD-1**	EPA 7470A	5404	EPA 7470A	5466
264546009	**EB-1**	EPA 7470A	5404	EPA 7470A	5466
264546010	**FB-1**	EPA 7470A	5404	EPA 7470A	5466
264546001	**PZ-44**	SM 2540C	409600		
264546002	**PZ-45**	SM 2540C	409600		
264546003	**PZ-46**	SM 2540C	409600		
264546004	**PZ-47**	SM 2540C	409600		
264546005	**PZ-48**	SM 2540C	409600		
264546006	**PZ-49**	SM 2540C	409600		
264546007	**PZ-50**	SM 2540C	409600		
264546008	**FD-1**	SM 2540C	409600		
264546009	**EB-1**	SM 2540C	409600		
264546010	**FB-1**	SM 2540C	409600		
264546001	**PZ-44**	EPA 300.0	5559		
264546002	**PZ-45**	EPA 300.0	5559		
264546003	**PZ-46**	EPA 300.0	5559		
264546004	**PZ-47**	EPA 300.0	5559		
264546005	**PZ-48**	EPA 300.0	5559		
264546006	**PZ-49**	EPA 300.0	5559		
264546007	**PZ-50**	EPA 300.0	5559		
264546008	**FD-1**	EPA 300.0	5559		
264546009	**EB-1**	EPA 300.0	5559		
264546010	**FB-1**	EPA 300.0	5559		

REPORT OF LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: _____ OF _____

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308 404-506-7234

REPORT TO: Jojo Abraham jdbraham@southernco.com
CC: Dawn Pell (dawn.pell@gadeq.org) Rachel Kirkman (rachel.kirkman@aecom.com)

REQUESTED COMPLETION DATE: standard TAT
PO #: lubarche@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III & IV (EPA 6020/7470)	Cl, F, SO4 (EPA 300.0)	Radium 226 & 228 (SW-846 9315/9320)	TDS (SM 2540C)	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P	P	
					PRESERVATION:		3	7	3	7	
5-1-18	1355	GW		X	PZ-44	5	1	1	2	1	
	1530			X	PZ-45	5	1	1	2	1	
	1650			X	PZ-46	5	1	1	2	1	
	1235			X	PZ-47	5	1	1	2	1	
	1405			X	PZ-48	5	1	1	2	1	
	1625			X	PZ-49	7	1	1	4	1	Extra Radium
	1920			X	PZ-50	5	1	1	2	1	
	-			X	FD-1	5	1	1	2	1	
	1830	W		X	EB-1	5	1	1	2	1	
	1420	W		X	FB-1	5	1	1	2	1	

LAB NUMBER

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

WO# : 264546

264546

SAMPLED BY AND TITLE: Karim MinKara Field Lead
DATE/TIME: 5-1-18/1200
RELINQUISHED BY: Karim
DATE/TIME: 5-2-18/1035
FOR LAB USE ONLY
LAB #:

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
Entered into LIMS:

RECEIVED BY LAB: Malman
DATE/TIME: 05/02/18 1035
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Tracking #:

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.8 Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 264546

PM: BM Due Date: 05/09/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used 83

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: 5/2/18 MR

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

May 24, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 264548

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals

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(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 264548

Pennsylvania Certification IDs

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
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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110 Technology Parkway
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(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 264548

Lab ID	Sample ID	Matrix	Date Collected	Date Received
264548001	**PZ-44**	Water	05/01/18 13:55	05/02/18 10:35
264548002	**PZ-45**	Water	05/01/18 15:30	05/02/18 10:35
264548003	**PZ-46**	Water	05/01/18 16:50	05/02/18 10:35
264548004	**PZ-47**	Water	05/01/18 12:35	05/02/18 10:35
264548005	**PZ-48**	Water	05/01/18 14:05	05/02/18 10:35
264548006	**PZ-49**	Water	05/01/18 16:25	05/02/18 10:35
264548007	**PZ-50**	Water	05/01/18 19:20	05/02/18 10:35
264548008	**FD-1**	Water	05/01/18 00:00	05/02/18 10:35
264548009	**EB-1**	Water	05/01/18 18:30	05/02/18 10:35
264548010	**FB-1**	Water	05/01/18 14:20	05/02/18 10:35

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 264548

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
264548001	**PZ-44**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548002	**PZ-45**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548003	**PZ-46**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548004	**PZ-47**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548005	**PZ-48**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548006	**PZ-49**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548007	**PZ-50**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548008	**FD-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548009	**EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
264548010	**FB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-44 **Lab ID: 264548001** Collected: 05/01/18 13:55 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.270 ± 0.0693 (0.0604) C:88% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**-0.119 ± 0.341 (0.818) C:77% T:81%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.270 ± 0.410 (0.878)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-45 **Lab ID: 264548002** Collected: 05/01/18 15:30 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.260 ± 0.0720 (0.0703) C:74% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**0.163 ± 0.353 (0.783) C:80% T:82%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.423 ± 0.425 (0.853)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-46 **Lab ID: 264548003** Collected: 05/01/18 16:50 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.417 ± 0.199 (0.275) C:82% T:NA**	pCi/L	05/15/18 08:24	13982-63-3	
Radium-228	EPA 9320	**-0.0629 ± 0.342 (0.808) C:82% T:79%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.417 ± 0.541 (1.08)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-47 **Lab ID: 264548004** Collected: 05/01/18 12:35 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.808 ± 0.273 (0.217) C:81% T:NA**	pCi/L	05/15/18 08:22	13982-63-3	
Radium-228	EPA 9320	**1.28 ± 0.557 (0.951) C:79% T:82%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**2.09 ± 0.830 (1.17)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-48 **Lab ID: 264548005** Collected: 05/01/18 14:05 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.808 ± 0.147 (0.0547) C:91% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**1.14 ± 0.506 (0.840) C:76% T:82%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**1.95 ± 0.653 (0.895)**	pCi/L	05/24/18 16:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-49 **Lab ID: 264548006** Collected: 05/01/18 16:25 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.331 ± 0.0817 (0.0710) C:81% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**1.19 ± 0.513 (0.837) C:72% T:80%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**1.52 ± 0.595 (0.908)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: PZ-50 **Lab ID: 264548007** Collected: 05/01/18 19:20 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.525 ± 0.105 (0.0590) C:104% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**1.16 ± 0.548 (0.944) C:78% T:70%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**1.69 ± 0.653 (1.00)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: FD-1 **Lab ID: 264548008** Collected: 05/01/18 00:00 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.694 ± 0.130 (0.0609) C:98% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**0.533 ± 0.477 (0.966) C:72% T:67%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**1.23 ± 0.607 (1.03)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: EB-1 **Lab ID: 264548009** Collected: 05/01/18 18:30 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.279 ± 0.0789 (0.0891) C:82% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**0.623 ± 0.448 (0.863) C:77% T:65%**	pCi/L	05/22/18 11:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.902 ± 0.527 (0.952)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

Sample: FB-1 **Lab ID: 264548010** Collected: 05/01/18 14:20 Received: 05/02/18 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.218 ± 0.0651 (0.0725) C:83% T:NA**	pCi/L	05/14/18 20:03	13982-63-3	
Radium-228	EPA 9320	**0.389 ± 0.490 (1.04) C:80% T:64%**	pCi/L	05/22/18 11:21	15262-20-1	
Total Radium	Total Radium Calculation	**0.607 ± 0.555 (1.11)**	pCi/L	05/24/18 16:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

QC Batch: 297321 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 264548001, 264548002, 264548003, 264548004, 264548005, 264548006, 264548007, 264548008, 264548009, 264548010

METHOD BLANK: 1455500 Matrix: Water
Associated Lab Samples: 264548001, 264548002, 264548003, 264548004, 264548005, 264548006, 264548007, 264548008, 264548009, 264548010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.374 ± 0.322 (0.646) C:85% T:80%	pCi/L	05/22/18 11:20	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 264548

QC Batch: 297610 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 264548001, 264548002, 264548003, 264548004, 264548005, 264548006, 264548007, 264548008, 264548009, 264548010

METHOD BLANK: 1456782 Matrix: Water
Associated Lab Samples: 264548001, 264548002, 264548003, 264548004, 264548005, 264548006, 264548007, 264548008, 264548009, 264548010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.212 ± 0.129 (0.184) C:93% T:NA	pCi/L	05/15/18 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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 264548

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.

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 264548

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
264548001	**PZ-44**	EPA 9315	297610		
264548002	**PZ-45**	EPA 9315	297610		
264548003	**PZ-46**	EPA 9315	297610		
264548004	**PZ-47**	EPA 9315	297610		
264548005	**PZ-48**	EPA 9315	297610		
264548006	**PZ-49**	EPA 9315	297610		
264548007	**PZ-50**	EPA 9315	297610		
264548008	**FD-1**	EPA 9315	297610		
264548009	**EB-1**	EPA 9315	297610		
264548010	**FB-1**	EPA 9315	297610		
264548001	**PZ-44**	EPA 9320	297321		
264548002	**PZ-45**	EPA 9320	297321		
264548003	**PZ-46**	EPA 9320	297321		
264548004	**PZ-47**	EPA 9320	297321		
264548005	**PZ-48**	EPA 9320	297321		
264548006	**PZ-49**	EPA 9320	297321		
264548007	**PZ-50**	EPA 9320	297321		
264548008	**FD-1**	EPA 9320	297321		
264548009	**EB-1**	EPA 9320	297321		
264548010	**FB-1**	EPA 9320	297321		
264548001	**PZ-44**	Total Radium Calculation	299750		
264548002	**PZ-45**	Total Radium Calculation	299750		
264548003	**PZ-46**	Total Radium Calculation	299750		
264548004	**PZ-47**	Total Radium Calculation	299750		
264548005	**PZ-48**	Total Radium Calculation	299750		
264548006	**PZ-49**	Total Radium Calculation	299750		
264548007	**PZ-50**	Total Radium Calculation	299750		
264548008	**FD-1**	Total Radium Calculation	299750		
264548009	**EB-1**	Total Radium Calculation	299750		
264548010	**FB-1**	Total Radium Calculation	299750		

REPORT OF LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: _____ OF _____

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308 404-506-7234

REPORT TO: Jason Abraham jabraham@southernco.com
CC: Dawn Hall (dawn_hall@golder.com) Rachel Kirkham (rachel_kirkham@golder.com)

REQUESTED COMPLETION DATE: standard TAT
PO #: jabraham@southernco.com

PROJECT NAME/STATE: Plant Branch AP

PROJECT #: Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App III & IV (EPA 6020/7470)	Cl, F, SO4 (EPA 300.0)	Radium 226 & 228 (SW-846 9315/9320)	TDS (SM 2540C)
5-1-18	1355	GW		X	PZ-44	5		1	1	2	1
	1530			X	PZ-45	5		1	1	2	1
	1650			X	PZ-46	5		1	1	2	1
	1235			X	PZ-47	5		1	1	2	1
	1405			X	PZ-48	5		1	1	2	1
	1625			X	PZ-49	7		1	1	4	1
	1920			X	PZ-50	5		1	1	2	1
	-			X	FB-1	5		1	1	2	1
	1830	W		X	FB-1	5		1	1	2	1
	1420	W		X	FB-1	5		1	1	2	1

ANALYSIS REQUESTED

CONTAINER TYPE: P P P P
PRESERVATION: 2 7 3 7

LAB ID NUMBER

CONTAINER TYPE
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, <6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

Extra Radium

WO# : 264548

264548

SAMPLED BY AND TITLE: Karen McKaig Field Lead
DATE/TIME: 5-1-18/1200

RELINQUISHED BY: Karen McKaig
DATE/TIME: 5-2-18/1035

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Malman
DATE/TIME: 05/02/18 1035

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.8 Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 264548

PM: BM **Due Date: 05/31/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 5/2/18 MR

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

LABORATORY ANALYTICAL DATA

June 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 05, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 266541

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 27, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 266541

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 266541

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266541001	**BRGWA-12S**	Water	06/26/18 11:53	06/27/18 11:45
266541002	**BRGWA-12I**	Water	06/26/18 13:15	06/27/18 11:45
266541003	**BRGWA-23S**	Water	06/26/18 15:38	06/27/18 11:45
266541004	**BRGWC-25I**	Water	06/26/18 15:20	06/27/18 11:45
266541005	**Dup-1**	Water	06/26/18 00:00	06/27/18 11:45

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 266541

Lab ID	Sample ID	Method	Analysts	Analytes Reported
266541001	**BRGWA-12S**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266541002	**BRGWA-12I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266541003	**BRGWA-23S**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266541004	**BRGWC-25I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266541005	**Dup-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266541

Sample: BRGWA-12S **Lab ID: 266541001** Collected: 06/26/18 11:53 Received: 06/27/18 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/28/18 13:05	06/29/18 16:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/28/18 13:05	06/29/18 16:39	7440-38-2	
Barium	**0.059**	mg/L	0.010	0.00078	1	06/28/18 13:05	06/29/18 16:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/28/18 13:05	06/29/18 16:39	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	06/28/18 13:05	06/29/18 16:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/28/18 13:05	06/29/18 16:39	7440-43-9	
Calcium	**6.4**	mg/L	0.50	0.014	1	06/28/18 13:05	06/29/18 16:39	7440-70-2	
Chromium	**0.0022J**	mg/L	0.010	0.0016	1	06/28/18 13:05	06/29/18 16:39	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/28/18 13:05	06/29/18 16:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/28/18 13:05	06/29/18 16:39	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/28/18 13:05	06/29/18 16:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/28/18 13:05	06/29/18 16:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/28/18 13:05	06/29/18 16:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/28/18 13:05	06/29/18 16:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 14:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**90.0**	mg/L	10.0	10.0	1		06/29/18 18:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		06/29/18 15:59	16887-00-6	
Fluoride	**0.042J**	mg/L	0.30	0.029	1		06/29/18 15:59	16984-48-8	
Sulfate	**0.84J**	mg/L	1.0	0.017	1		06/29/18 15:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266541

Sample: BRGWA-12I **Lab ID: 266541002** Collected: 06/26/18 13:15 Received: 06/27/18 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/28/18 13:05	06/29/18 16:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/28/18 13:05	06/29/18 16:51	7440-38-2	
Barium	**0.063**	mg/L	0.010	0.00078	1	06/28/18 13:05	06/29/18 16:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/28/18 13:05	06/29/18 16:51	7440-41-7	
Boron	**0.0080J**	mg/L	0.040	0.0039	1	06/28/18 13:05	06/29/18 16:51	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/28/18 13:05	06/29/18 16:51	7440-43-9	
Calcium	**15.5J**	mg/L	25.0	0.69	50	06/28/18 13:05	06/29/18 16:57	7440-70-2	D3,M6
Chromium	ND	mg/L	0.010	0.0016	1	06/28/18 13:05	06/29/18 16:51	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/28/18 13:05	06/29/18 16:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/28/18 13:05	06/29/18 16:51	7439-92-1	
Lithium	**0.0045J**	mg/L	0.050	0.00097	1	06/28/18 13:05	06/29/18 16:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/28/18 13:05	06/29/18 16:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/28/18 13:05	06/29/18 16:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/28/18 13:05	06/29/18 16:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 14:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**142**	mg/L	10.0	10.0	1		06/29/18 18:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		06/29/18 16:21	16887-00-6	
Fluoride	**0.079J**	mg/L	0.30	0.029	1		06/29/18 16:21	16984-48-8	
Sulfate	**2.0**	mg/L	1.0	0.017	1		06/29/18 16:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266541

Sample: BRGWA-23S **Lab ID: 266541003** Collected: 06/26/18 15:38 Received: 06/27/18 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0020J**	mg/L	0.0030	0.00078	1	06/28/18 13:05	06/29/18 17:53	7440-36-0	
Arsenic	**0.00062J**	mg/L	0.0050	0.00057	1	06/28/18 13:05	06/29/18 17:53	7440-38-2	
Barium	**0.13**	mg/L	0.010	0.00078	1	06/28/18 13:05	06/29/18 17:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/28/18 13:05	06/29/18 17:53	7440-41-7	
Boron	**0.062**	mg/L	0.040	0.0039	1	06/28/18 13:05	06/29/18 17:53	7440-42-8	
Cadmium	**0.00015J**	mg/L	0.0010	0.000093	1	06/28/18 13:05	06/29/18 17:53	7440-43-9	
Calcium	**18.5J**	mg/L	25.0	0.69	50	06/28/18 13:05	06/29/18 17:58	7440-70-2	D3
Chromium	ND	mg/L	0.010	0.0016	1	06/28/18 13:05	06/29/18 17:53	7440-47-3	
Cobalt	**0.0098J**	mg/L	0.010	0.00052	1	06/28/18 13:05	06/29/18 17:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/28/18 13:05	06/29/18 17:53	7439-92-1	
Lithium	**0.0095J**	mg/L	0.050	0.00097	1	06/28/18 13:05	06/29/18 17:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/28/18 13:05	06/29/18 17:53	7439-98-7	
Selenium	**0.0036J**	mg/L	0.010	0.0014	1	06/28/18 13:05	06/29/18 17:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/28/18 13:05	06/29/18 17:53	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 14:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**221**	mg/L	10.0	10.0	1		06/29/18 18:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.8**	mg/L	0.25	0.024	1		06/29/18 16:44	16887-00-6	
Fluoride	**0.053J**	mg/L	0.30	0.029	1		06/29/18 16:44	16984-48-8	
Sulfate	**84.2**	mg/L	10.0	0.17	10		07/03/18 16:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266541

Sample: BRGWC-25I **Lab ID: 266541004** Collected: 06/26/18 15:20 Received: 06/27/18 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/28/18 13:05	06/29/18 18:04	7440-36-0	
Arsenic	**0.00072J**	mg/L	0.0050	0.00057	1	06/28/18 13:05	06/29/18 18:04	7440-38-2	
Barium	**0.031**	mg/L	0.010	0.00078	1	06/28/18 13:05	06/29/18 18:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/28/18 13:05	06/29/18 18:04	7440-41-7	
Boron	**1.8**	mg/L	0.040	0.0039	1	06/28/18 13:05	06/29/18 18:04	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/28/18 13:05	06/29/18 18:04	7440-43-9	
Calcium	**55.5**	mg/L	25.0	0.69	50	06/28/18 13:05	06/29/18 18:10	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/28/18 13:05	06/29/18 18:04	7440-47-3	
Cobalt	**0.0060J**	mg/L	0.010	0.00052	1	06/28/18 13:05	06/29/18 18:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/28/18 13:05	06/29/18 18:04	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/28/18 13:05	06/29/18 18:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/28/18 13:05	06/29/18 18:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/28/18 13:05	06/29/18 18:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/28/18 13:05	06/29/18 18:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 14:55	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**414**	mg/L	10.0	10.0	1		06/29/18 18:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.7**	mg/L	0.25	0.024	1		06/29/18 17:07	16887-00-6	
Fluoride	**0.15J**	mg/L	0.30	0.029	1		06/29/18 17:07	16984-48-8	
Sulfate	**231**	mg/L	20.0	0.34	20		07/03/18 17:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266541

Sample: Dup-1 **Lab ID: 266541005** Collected: 06/26/18 00:00 Received: 06/27/18 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/28/18 13:05	06/29/18 18:16	7440-36-0	
Arsenic	**0.00091J**	mg/L	0.0050	0.00057	1	06/28/18 13:05	06/29/18 18:16	7440-38-2	
Barium	**0.032**	mg/L	0.010	0.00078	1	06/28/18 13:05	06/29/18 18:16	7440-39-3	
Beryllium	**0.000073J**	mg/L	0.0030	0.000050	1	06/28/18 13:05	06/29/18 18:16	7440-41-7	
Boron	**1.7**	mg/L	0.040	0.0039	1	06/28/18 13:05	06/29/18 18:16	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/28/18 13:05	06/29/18 18:16	7440-43-9	
Calcium	**54.2**	mg/L	25.0	0.69	50	06/28/18 13:05	06/29/18 18:21	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/28/18 13:05	06/29/18 18:16	7440-47-3	
Cobalt	**0.0065J**	mg/L	0.010	0.00052	1	06/28/18 13:05	06/29/18 18:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/28/18 13:05	06/29/18 18:16	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/28/18 13:05	06/29/18 18:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/28/18 13:05	06/29/18 18:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/28/18 13:05	06/29/18 18:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/28/18 13:05	06/29/18 18:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**408**	mg/L	10.0	10.0	1		06/29/18 18:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.6**	mg/L	0.25	0.024	1		06/29/18 17:30	16887-00-6	
Fluoride	**0.15J**	mg/L	0.30	0.029	1		06/29/18 17:30	16984-48-8	
Sulfate	**237**	mg/L	20.0	0.34	20		07/03/18 17:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266541

QC Batch: 9011 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

METHOD BLANK: 41261 Matrix: Water
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000036	06/29/18 14:36	

LABORATORY CONTROL SAMPLE: 41262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41263 41264

Parameter	Units	266541001 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	.0025	.0025	0.0025	0.0026	99	103	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266541

QC Batch: 8929 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

METHOD BLANK: 40910 Matrix: Water
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	06/29/18 15:17	
Arsenic	mg/L	ND	0.0050	0.00057	06/29/18 15:17	
Barium	mg/L	ND	0.010	0.00078	06/29/18 15:17	
Beryllium	mg/L	ND	0.0030	0.000050	06/29/18 15:17	
Boron	mg/L	ND	0.040	0.0039	06/29/18 15:17	
Cadmium	mg/L	ND	0.0010	0.000093	06/29/18 15:17	
Calcium	mg/L	ND	0.50	0.014	06/29/18 15:17	
Chromium	mg/L	ND	0.010	0.0016	06/29/18 15:17	
Cobalt	mg/L	ND	0.010	0.00052	06/29/18 15:17	
Lead	mg/L	ND	0.0050	0.00027	06/29/18 15:17	
Lithium	mg/L	ND	0.050	0.00097	06/29/18 15:17	
Molybdenum	mg/L	ND	0.010	0.0019	06/29/18 15:17	
Selenium	mg/L	ND	0.010	0.0014	06/29/18 15:17	
Thallium	mg/L	ND	0.0010	0.00014	06/29/18 15:17	

LABORATORY CONTROL SAMPLE: 40911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	102	80-120	
Arsenic	mg/L	.1	0.10	102	80-120	
Barium	mg/L	.1	0.098	98	80-120	
Beryllium	mg/L	.1	0.11	107	80-120	
Boron	mg/L	1	1.1	110	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	102	80-120	
Chromium	mg/L	.1	0.10	104	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lead	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.11	109	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 40912 40913

Parameter	Units	266541002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266541

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 40912 40913

Parameter	Units	266541002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	.1	.1	0.10	0.10	101	99	75-125	2	20	
Barium	mg/L	0.063	.1	.1	0.18	0.18	116	121	75-125	3	20	
Beryllium	mg/L	ND	.1	.1	0.11	0.11	109	106	75-125	3	20	
Boron	mg/L	0.0080J	1	1	1.1	1.1	110	108	75-125	2	20	
Cadmium	mg/L	ND	.1	.1	0.099	0.098	99	98	75-125	1	20	
Calcium	mg/L	15.5J	1	1	15.4J	15.5J	-12	4	75-125	1	20	M6
Chromium	mg/L	ND	.1	.1	0.11	0.11	106	105	75-125	1	20	
Cobalt	mg/L	ND	.1	.1	0.11	0.10	107	103	75-125	4	20	
Lead	mg/L	ND	.1	.1	0.098	0.097	98	97	75-125	2	20	
Lithium	mg/L	0.0045J	.1	.1	0.11	0.11	107	106	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.098	0.099	98	99	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.098	0.097	97	97	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266541

QC Batch: 9043 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

LABORATORY CONTROL SAMPLE: 41410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	416	104	84-108	

SAMPLE DUPLICATE: 41411

Parameter	Units	266484002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	186	188	1	10	

SAMPLE DUPLICATE: 41902

Parameter	Units	266548001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	201	201	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266541

QC Batch: 8908 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

METHOD BLANK: 40829 Matrix: Water
Associated Lab Samples: 266541001, 266541002, 266541003, 266541004, 266541005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.31	0.25	0.024	06/29/18 11:01	
Fluoride	mg/L	ND	0.30	0.029	06/29/18 11:01	
Sulfate	mg/L	ND	1.0	0.017	06/29/18 11:01	

LABORATORY CONTROL SAMPLE: 40830

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.5	105	90-110	
Sulfate	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 40831 40832

Parameter	Units	266538001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.4	10	10	12.6	12.6	102	101	90-110	0	15	
Fluoride	mg/L	0.085J	10	10	10.7	10.7	106	106	90-110	0	15	
Sulfate	mg/L	6.2	10	10	16.5	16.5	102	102	90-110	0	15	

MATRIX SPIKE SAMPLE: 40833

Parameter	Units	266538002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.2	10	12.2	100	90-110	
Fluoride	mg/L	0.048J	10	10.5	104	90-110	
Sulfate	mg/L	0.69J	10	11.2	105	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 266541

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

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 266541

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266541001	**BRGWA-12S**	EPA 3005A	8929	EPA 6020B	9053
266541002	**BRGWA-12I**	EPA 3005A	8929	EPA 6020B	9053
266541003	**BRGWA-23S**	EPA 3005A	8929	EPA 6020B	9053
266541004	**BRGWC-25I**	EPA 3005A	8929	EPA 6020B	9053
266541005	**Dup-1**	EPA 3005A	8929	EPA 6020B	9053
266541001	**BRGWA-12S**	EPA 7470A	9011	EPA 7470A	9048
266541002	**BRGWA-12I**	EPA 7470A	9011	EPA 7470A	9048
266541003	**BRGWA-23S**	EPA 7470A	9011	EPA 7470A	9048
266541004	**BRGWC-25I**	EPA 7470A	9011	EPA 7470A	9048
266541005	**Dup-1**	EPA 7470A	9011	EPA 7470A	9048
266541001	**BRGWA-12S**	SM 2540C	9043		
266541002	**BRGWA-12I**	SM 2540C	9043		
266541003	**BRGWA-23S**	SM 2540C	9043		
266541004	**BRGWC-25I**	SM 2540C	9043		
266541005	**Dup-1**	SM 2540C	9043		
266541001	**BRGWA-12S**	EPA 300.0	8908		
266541002	**BRGWA-12I**	EPA 300.0	8908		
266541003	**BRGWA-23S**	EPA 300.0	8908		
266541004	**BRGWC-25I**	EPA 300.0	8908		
266541005	**Dup-1**	EPA 300.0	8908		

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE 30308S
Atlanta, GA 30308 P. 404-506-7234

REPORT TO: Jaji Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: jahrahe@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE:	PRESERVATION:	Metals APP3 & 4 (EPA 6020 / 7470)	TDS, Cl, F, SO4 (EPA 300.0 + SM2540C)	Radium 226 & 228 (9315 / 9320 SW-846)
							P	P	3	7	3
6-26-18	1153	GW		X	BRGWA-12S	4			1	1	2
6-26-18	1315	GW		X	BRGWA-12I	4			1	1	2
6-26-18	1538	GW		X	BRGWA-23S	4			1	1	2
6-26-18	1520	GW		X	BRGWL-25I	4			1	1	2
6-26-18	—	GW		X	DUP-1	4			1	1	2

LAB NUMBER

CONTAINER TYPE
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 266541

266541

SAMPLED BY AND TITLE: William Ballow / Geologist | DATE/TIME: 6-26-18 / 1800

RELINQUISHED BY: | DATE/TIME: 6-27-18 / 0830

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY/LAB: | DATE/TIME: 06/27/18 1145

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 0.3 Max

Custody Seal: Intact Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266541

PM: BM Due Date: 07/05/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.3 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 6/27/18 MR

Temp should be above freezing to 6°C

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

Client Notification/ Resolution:

Person Contacted: Date/Time: Field Data Required? Y N

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 DENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 26, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 266542

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 27, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 266542

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 266542

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266542001	**BRGWA-12S**	Water	06/26/18 11:53	06/27/18 11:45
266542002	**BRGWA-12I**	Water	06/26/18 13:15	06/27/18 11:45
266542003	**BRGWA-23S**	Water	06/26/18 15:38	06/27/18 11:45
266542004	**BRGWC-25I**	Water	06/26/18 15:20	06/27/18 11:45
266542005	**Dup-1**	Water	06/26/18 00:00	06/27/18 11:45

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 266542

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266542001	**BRGWA-12S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266542002	**BRGWA-12I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266542003	**BRGWA-23S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266542004	**BRGWC-25I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266542005	**Dup-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266542

Sample: BRGWA-12S **Lab ID: 266542001** Collected: 06/26/18 11:53 Received: 06/27/18 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.368 ± 0.165 (0.197) C:91% T:NA**	pCi/L	07/09/18 08:06	13982-63-3	
Radium-228	EPA 9320	**0.938 ± 0.524 (0.962) C:78% T:74%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.689 (1.16)**	pCi/L	07/24/18 11:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266542

Sample: BRGWA-12I **Lab ID: 266542002** Collected: 06/26/18 13:15 Received: 06/27/18 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.412 ± 0.169 (0.173) C:92% T:NA**	pCi/L	07/09/18 08:11	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.495 (0.862) C:74% T:82%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.42 ± 0.664 (1.04)**	pCi/L	07/24/18 11:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266542

Sample: BRGWA-23S **Lab ID: 266542003** Collected: 06/26/18 15:38 Received: 06/27/18 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.450 ± 0.220 (0.338) C:79% T:NA**	pCi/L	07/09/18 08:12	13982-63-3	
Radium-228	EPA 9320	**0.894 ± 0.567 (1.07) C:72% T:68%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.34 ± 0.787 (1.41)**	pCi/L	07/24/18 11:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266542

Sample: BRGWC-25I **Lab ID: 266542004** Collected: 06/26/18 15:20 Received: 06/27/18 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.336 ± 0.159 (0.192) C:88% T:NA**	pCi/L	07/09/18 08:12	13982-63-3	
Radium-228	EPA 9320	**0.632 ± 0.511 (1.03) C:67% T:85%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.968 ± 0.670 (1.22)**	pCi/L	07/24/18 11:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266542

Sample: Dup-1 **Lab ID: 266542005** Collected: 06/26/18 00:00 Received: 06/27/18 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.227 ± 0.138 (0.215) C:92% T:NA**	pCi/L	07/09/18 08:12	13982-63-3	
Radium-228	EPA 9320	**0.599 ± 0.539 (1.10) C:67% T:74%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.826 ± 0.677 (1.32)**	pCi/L	07/24/18 11:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266542

QC Batch: 304503 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266542001, 266542002, 266542003, 266542004, 266542005

METHOD BLANK: 1489835 Matrix: Water
Associated Lab Samples: 266542001, 266542002, 266542003, 266542004, 266542005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.224 ± 0.132 (0.194) C:96% T:NA	pCi/L	07/09/18 08:06	

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
Pace Project No.: 266542

QC Batch: 304502 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266542001, 266542002, 266542003, 266542004, 266542005

METHOD BLANK: 1489833 Matrix: Water
Associated Lab Samples: 266542001, 266542002, 266542003, 266542004, 266542005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.518 ± 0.408 (0.794) C:78% T:66%	pCi/L	07/19/18 15:40	

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
Pace Project No.: 266542

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

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 266542

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266542001	**BRGWA-12S**	EPA 9315	304503		
266542002	**BRGWA-12I**	EPA 9315	304503		
266542003	**BRGWA-23S**	EPA 9315	304503		
266542004	**BRGWC-25I**	EPA 9315	304503		
266542005	**Dup-1**	EPA 9315	304503		
266542001	**BRGWA-12S**	EPA 9320	304502		
266542002	**BRGWA-12I**	EPA 9320	304502		
266542003	**BRGWA-23S**	EPA 9320	304502		
266542004	**BRGWC-25I**	EPA 9320	304502		
266542005	**Dup-1**	EPA 9320	304502		
266542001	**BRGWA-12S**	Total Radium Calculation	306888		
266542002	**BRGWA-12I**	Total Radium Calculation	306888		
266542003	**BRGWA-23S**	Total Radium Calculation	306888		
266542004	**BRGWC-25I**	Total Radium Calculation	306888		
266542005	**Dup-1**	Total Radium Calculation	306888		

CHAIN OF CUSTODY RECORD

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Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 31085 Atlanta, GA 30303 P. 404-506 7239

REPORT TO: Joju Abraham

CC: Maria Padilla

REQUESTED COMPLETION DATE: —

PO #: jabraha@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

	Metals App 3 & 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 & 228 (SW-846 9315/9320)
CONTAINER TYPE:	P	P	P
PRESERVATION:	3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App 3 & 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB I.D. NUMBER	REMARKS/ADDITIONAL INFORMATION
6-26-18	1153	GW		X	BRGWA-12S	4	1	1	2		
6-26-18	1315	GW		X	BRGWA-12I	4	1	1	2		
6-26-18	1538	GW		X	BRGWA-23S	4	1	1	2		
6-26-18	1520	GW		X	BRGWL-25I	4	1	1	2		
6-26-18	—	GW		X	DUP-1	4	1	1	2		

CONTAINER TYPE
- P - PLASTIC
- A - AMBER GLASS
- G - CLEAR GLASS
- V - VOA VIAL
- S - STERILE
- O - OTHER

PRESERVATION
- 1 - HCl, ≤6°C
- 2 - H_2SO_4, ≤6°C
- 3 - HNO_3
- 4 - NaOH, ≤6°C
- 5 - NaOH/ZnAc, ≤6°C
- 6 - $Na_2S_2O_3$, ≤6°C
- 7 - ≤6°C not frozen

***MATRIX CODES:**
- DW - DRINKING WATER
- WW - WASTEWATER
- GW - GROUNDWATER
- SW - SURFACE WATER
- ST - STORM WATER
- W - WATER
- S - SOIL
- SL - SLUDGE
- SD - SOLID
- A - AIR
- L - LIQUID
- P - PRODUCT

WO# : 266542
266542

SAMPLED BY AND TITLE: William Bullow / Geologist — DATE/TIME: 6-26-18 / 1800

RELINQUISHED BY: [signature] — DATE/TIME: 6-27-18 / 0830

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [signature] — DATE/TIME: 06/27/18 1145

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (circled) CLIENT OTHER FS

# of Coolers:

pH checked: Yes (circled) No NA

Ice: Yes (circled) No NA

Temperature: Min: 0.3 Max:

Custody Seal: Intact (circled) Broken Not Present N/A

Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266542
PM: BM Due Date: 07/26/18
CLIENT: GAPower-CCR

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: 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/27/18 MR

Comments:

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 09, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 266580

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 266580

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 266580

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266580001	**BRGWC-27I**	Water	06/27/18 14:30	06/28/18 10:15
266580002	**BRGWC-29I**	Water	06/27/18 13:18	06/28/18 10:15
266580003	**BRGWC-32S**	Water	06/27/18 09:55	06/28/18 10:15
266580004	**BRGWC-47**	Water	06/27/18 10:20	06/28/18 10:15
266580005	**FB-2**	Water	06/27/18 15:45	06/28/18 10:15
266580006	**RB-2**	Water	06/27/18 15:35	06/28/18 10:15

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 266580

Lab ID	Sample ID	Method	Analysts	Analytes Reported
266580001	**BRGWC-27I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266580002	**BRGWC-29I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266580003	**BRGWC-32S**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266580004	**BRGWC-47**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266580005	**FB-2**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266580006	**RB-2**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266580

Sample: BRGWC-27I **Lab ID: 266580001** Collected: 06/27/18 14:30 Received: 06/28/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/29/18 10:35	06/29/18 20:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/29/18 10:35	06/29/18 20:29	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	06/29/18 10:35	06/29/18 20:29	7440-39-3	
Beryllium	**0.00014J**	mg/L	0.0030	0.000050	1	06/29/18 10:35	06/29/18 20:29	7440-41-7	
Boron	**1.4**	mg/L	0.040	0.0039	1	06/29/18 10:35	06/29/18 20:29	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/29/18 10:35	06/29/18 20:29	7440-43-9	
Calcium	**68.2**	mg/L	25.0	0.69	50	06/29/18 10:35	06/29/18 20:35	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/29/18 10:35	06/29/18 20:29	7440-47-3	
Cobalt	**0.0093J**	mg/L	0.010	0.00052	1	06/29/18 10:35	06/29/18 20:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/29/18 10:35	06/29/18 20:29	7439-92-1	
Lithium	**0.0016J**	mg/L	0.050	0.00097	1	06/29/18 10:35	06/29/18 20:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/29/18 10:35	06/29/18 20:29	7439-98-7	
Selenium	**0.0014J**	mg/L	0.010	0.0014	1	06/29/18 10:35	06/29/18 20:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/29/18 10:35	06/29/18 20:29	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:21	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**458**	mg/L	10.0	10.0	1		06/29/18 18:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.9**	mg/L	0.25	0.024	1		07/02/18 22:24	16887-00-6	
Fluoride	**0.26J**	mg/L	0.30	0.029	1		07/02/18 22:24	16984-48-8	
Sulfate	**205**	mg/L	20.0	0.34	20		07/06/18 15:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266580

Sample: BRGWC-29I **Lab ID: 266580002** Collected: 06/27/18 13:18 Received: 06/28/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/29/18 10:35	06/29/18 20:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/29/18 10:35	06/29/18 20:40	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	06/29/18 10:35	06/29/18 20:40	7440-39-3	
Beryllium	**0.00080J**	mg/L	0.0030	0.000050	1	06/29/18 10:35	06/29/18 20:40	7440-41-7	
Boron	**1.8**	mg/L	0.040	0.0039	1	06/29/18 10:35	06/29/18 20:40	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/29/18 10:35	06/29/18 20:40	7440-43-9	
Calcium	**61.1**	mg/L	25.0	0.69	50	06/29/18 10:35	06/29/18 20:46	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/29/18 10:35	06/29/18 20:40	7440-47-3	
Cobalt	**0.0069J**	mg/L	0.010	0.00052	1	06/29/18 10:35	06/29/18 20:40	7440-48-4	
Lead	**0.00032J**	mg/L	0.0050	0.00027	1	06/29/18 10:35	06/29/18 20:40	7439-92-1	
Lithium	**0.0034J**	mg/L	0.050	0.00097	1	06/29/18 10:35	06/29/18 20:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/29/18 10:35	06/29/18 20:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/29/18 10:35	06/29/18 20:40	7782-49-2	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	06/29/18 10:35	06/29/18 20:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**648**	mg/L	10.0	10.0	1		06/29/18 18:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.3**	mg/L	0.25	0.024	1		07/02/18 22:45	16887-00-6	
Fluoride	**0.085J**	mg/L	0.30	0.029	1		07/02/18 22:45	16984-48-8	
Sulfate	**281**	mg/L	20.0	0.34	20		07/06/18 15:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266580

Sample: BRGWC-32S **Lab ID: 266580003** Collected: 06/27/18 09:55 Received: 06/28/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/29/18 10:35	06/29/18 20:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/29/18 10:35	06/29/18 20:52	7440-38-2	
Barium	**0.038**	mg/L	0.010	0.00078	1	06/29/18 10:35	06/29/18 20:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/29/18 10:35	06/29/18 20:52	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	06/29/18 10:35	06/29/18 20:52	7440-42-8	
Cadmium	**0.00011J**	mg/L	0.0010	0.000093	1	06/29/18 10:35	06/29/18 20:52	7440-43-9	
Calcium	**67.1**	mg/L	25.0	0.69	50	06/29/18 10:35	06/29/18 20:57	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/29/18 10:35	06/29/18 20:52	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/29/18 10:35	06/29/18 20:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/29/18 10:35	06/29/18 20:52	7439-92-1	
Lithium	**0.0023J**	mg/L	0.050	0.00097	1	06/29/18 10:35	06/29/18 20:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/29/18 10:35	06/29/18 20:52	7439-98-7	
Selenium	**0.0017J**	mg/L	0.010	0.0014	1	06/29/18 10:35	06/29/18 20:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/29/18 10:35	06/29/18 20:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2280**	mg/L	10.0	10.0	1		06/29/18 18:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.1**	mg/L	0.25	0.024	1		07/02/18 23:06	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/02/18 23:06	16984-48-8	
Sulfate	**372**	mg/L	20.0	0.34	20		07/06/18 16:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266580

Sample: BRGWC-47 **Lab ID: 266580004** Collected: 06/27/18 10:20 Received: 06/28/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/29/18 10:35	06/29/18 21:15	7440-36-0	
Arsenic	**0.0016J**	mg/L	0.0050	0.00057	1	06/29/18 10:35	06/29/18 21:15	7440-38-2	
Barium	**0.046**	mg/L	0.010	0.00078	1	06/29/18 10:35	06/29/18 21:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/29/18 10:35	06/29/18 21:15	7440-41-7	
Boron	**0.49**	mg/L	0.040	0.0039	1	06/29/18 10:35	06/29/18 21:15	7440-42-8	
Cadmium	**0.00014J**	mg/L	0.0010	0.000093	1	06/29/18 10:35	06/29/18 21:15	7440-43-9	
Calcium	**340**	mg/L	25.0	0.69	50	06/29/18 10:35	06/29/18 21:20	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/29/18 10:35	06/29/18 21:15	7440-47-3	
Cobalt	**0.0076J**	mg/L	0.010	0.00052	1	06/29/18 10:35	06/29/18 21:15	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/29/18 10:35	06/29/18 21:15	7439-92-1	
Lithium	**0.044J**	mg/L	0.050	0.00097	1	06/29/18 10:35	06/29/18 21:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/29/18 10:35	06/29/18 21:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/29/18 10:35	06/29/18 21:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/29/18 10:35	06/29/18 21:15	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**31.0**	mg/L	10.0	10.0	1		06/29/18 18:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.4**	mg/L	0.25	0.024	1		07/02/18 23:26	16887-00-6	
Fluoride	**0.27J**	mg/L	0.30	0.029	1		07/02/18 23:26	16984-48-8	
Sulfate	**1450**	mg/L	50.0	0.85	50		07/06/18 16:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266580

Sample: FB-2 **Lab ID: 266580005** Collected: 06/27/18 15:45 Received: 06/28/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/29/18 10:35	06/29/18 21:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/29/18 10:35	06/29/18 21:32	7440-38-2	
Barium	**0.0020J**	mg/L	0.010	0.00078	1	06/29/18 10:35	06/29/18 21:32	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/29/18 10:35	06/29/18 21:32	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	06/29/18 10:35	06/29/18 21:32	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/29/18 10:35	06/29/18 21:32	7440-43-9	
Calcium	**0.067J**	mg/L	0.50	0.014	1	06/29/18 10:35	06/29/18 21:32	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	06/29/18 10:35	06/29/18 21:32	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/29/18 10:35	06/29/18 21:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/29/18 10:35	06/29/18 21:32	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/29/18 10:35	06/29/18 21:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/29/18 10:35	06/29/18 21:32	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/29/18 10:35	06/29/18 21:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/29/18 10:35	06/29/18 21:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**32.0**	mg/L	10.0	10.0	1		06/29/18 18:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.26**	mg/L	0.25	0.024	1		07/02/18 23:47	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/02/18 23:47	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/02/18 23:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266580

Sample: RB-2 **Lab ID: 266580006** Collected: 06/27/18 15:35 Received: 06/28/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	06/29/18 10:35	06/29/18 21:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/29/18 10:35	06/29/18 21:37	7440-38-2	
Barium	**0.0022J**	mg/L	0.010	0.00078	1	06/29/18 10:35	06/29/18 21:37	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/29/18 10:35	06/29/18 21:37	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	06/29/18 10:35	06/29/18 21:37	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/29/18 10:35	06/29/18 21:37	7440-43-9	
Calcium	**0.049J**	mg/L	0.50	0.014	1	06/29/18 10:35	06/29/18 21:37	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	06/29/18 10:35	06/29/18 21:37	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/29/18 10:35	06/29/18 21:37	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/29/18 10:35	06/29/18 21:37	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/29/18 10:35	06/29/18 21:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/29/18 10:35	06/29/18 21:37	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/29/18 10:35	06/29/18 21:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/29/18 10:35	06/29/18 21:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	06/29/18 09:45	06/29/18 15:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**35.0**	mg/L	10.0	10.0	1		06/29/18 18:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.30**	mg/L	0.25	0.024	1		07/03/18 01:30	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/03/18 01:30	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/03/18 01:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266580

QC Batch: 9011 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

METHOD BLANK: 41261 Matrix: Water
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000036	06/29/18 14:36	

LABORATORY CONTROL SAMPLE: 41262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41263 41264

Parameter	Units	266541001 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	.0025	.0025	0.0025	0.0026	99	103	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266580

QC Batch: 9022 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

METHOD BLANK: 41298 Matrix: Water
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	06/29/18 18:00	
Arsenic	mg/L	ND	0.0050	0.00057	06/29/18 18:00	
Barium	mg/L	ND	0.010	0.00078	06/29/18 18:00	
Beryllium	mg/L	ND	0.0030	0.000050	06/29/18 18:00	
Boron	mg/L	ND	0.040	0.0039	06/29/18 18:00	
Cadmium	mg/L	ND	0.0010	0.000093	06/29/18 18:00	
Calcium	mg/L	0.030J	0.50	0.014	06/29/18 18:00	
Chromium	mg/L	ND	0.010	0.0016	06/29/18 18:00	
Cobalt	mg/L	ND	0.010	0.00052	06/29/18 18:00	
Lead	mg/L	ND	0.0050	0.00027	06/29/18 18:00	
Lithium	mg/L	ND	0.050	0.00097	06/29/18 18:00	
Molybdenum	mg/L	ND	0.010	0.0019	06/29/18 18:00	
Selenium	mg/L	ND	0.010	0.0014	06/29/18 18:00	
Thallium	mg/L	ND	0.0010	0.00014	06/29/18 18:00	

LABORATORY CONTROL SAMPLE: 41299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	104	80-120	
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.099	99	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	104	80-120	
Chromium	mg/L	.1	0.10	100	80-120	
Cobalt	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.10	103	80-120	
Lithium	mg/L	.1	0.097	97	80-120	
Molybdenum	mg/L	.1	0.10	102	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41300 41301

Parameter	Units	266578001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	110	110	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266580

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41300 41301

Parameter	Units	266578001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	.1	.1	0.11	0.10	110	105	75-125	5	20	
Barium	mg/L	0.028	.1	.1	0.14	0.14	107	107	75-125	0	20	
Beryllium	mg/L	0.00013J	.1	.1	0.10	0.095	103	94	75-125	9	20	
Boron	mg/L	2.2	1	1	3.5	3.4	131	116	75-125	4	20	M1
Cadmium	mg/L	0.00017J	.1	.1	0.11	0.10	105	105	75-125	1	20	
Calcium	mg/L	90.1	1	1	95.1	93.5	498	345	75-125	2	20	M6
Chromium	mg/L	ND	.1	.1	0.10	0.11	103	106	75-125	2	20	
Cobalt	mg/L	0.0041J	.1	.1	0.11	0.11	105	105	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	1	20	
Lithium	mg/L	ND	.1	.1	0.11	0.099	104	98	75-125	6	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	109	109	75-125	0	20	
Selenium	mg/L	ND	.1	.1	0.11	0.11	112	110	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266580

QC Batch: 9045 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

LABORATORY CONTROL SAMPLE: 41416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 41417

Parameter	Units	266570030 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	554	584	5	10	

SAMPLE DUPLICATE: 41418

Parameter	Units	266649001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	9800	10200	4	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266580

QC Batch: 9128 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

METHOD BLANK: 41788 Matrix: Water
Associated Lab Samples: 266580001, 266580002, 266580003, 266580004, 266580005, 266580006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.28	0.25	0.024	07/02/18 15:11	
Fluoride	mg/L	ND	0.30	0.029	07/02/18 15:11	
Sulfate	mg/L	ND	1.0	0.017	07/02/18 15:11	

LABORATORY CONTROL SAMPLE: 41789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41790 41791

Parameter	Units	266574001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	701	10	10	341	341	-3610	-3600	90-110	0	15	E,M1
Fluoride	mg/L	0.95	10	10	10.9	10.9	100	100	90-110	0	15	
Sulfate	mg/L	1.4	10	10	11.4	11.4	100	100	90-110	0	15	

MATRIX SPIKE SAMPLE: 41792

Parameter	Units	266574002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4930	10	648	-42800	90-110	E,M1
Fluoride	mg/L	0.15J	10	7.2	71	90-110	M1
Sulfate	mg/L	599	10	312	-2860	90-110	E,M1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 266580

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.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 266580

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266580001	**BRGWC-27I**	EPA 3005A	9022	EPA 6020B	9062
266580002	**BRGWC-29I**	EPA 3005A	9022	EPA 6020B	9062
266580003	**BRGWC-32S**	EPA 3005A	9022	EPA 6020B	9062
266580004	**BRGWC-47**	EPA 3005A	9022	EPA 6020B	9062
266580005	**FB-2**	EPA 3005A	9022	EPA 6020B	9062
266580006	**RB-2**	EPA 3005A	9022	EPA 6020B	9062
266580001	**BRGWC-27I**	EPA 7470A	9011	EPA 7470A	9048
266580002	**BRGWC-29I**	EPA 7470A	9011	EPA 7470A	9048
266580003	**BRGWC-32S**	EPA 7470A	9011	EPA 7470A	9048
266580004	**BRGWC-47**	EPA 7470A	9011	EPA 7470A	9048
266580005	**FB-2**	EPA 7470A	9011	EPA 7470A	9048
266580006	**RB-2**	EPA 7470A	9011	EPA 7470A	9048
266580001	**BRGWC-27I**	SM 2540C	9045		
266580002	**BRGWC-29I**	SM 2540C	9045		
266580003	**BRGWC-32S**	SM 2540C	9045		
266580004	**BRGWC-47**	SM 2540C	9045		
266580005	**FB-2**	SM 2540C	9045		
266580006	**RB-2**	SM 2540C	9045		
266580001	**BRGWC-27I**	EPA 300.0	9128		
266580002	**BRGWC-29I**	EPA 300.0	9128		
266580003	**BRGWC-32S**	EPA 300.0	9128		
266580004	**BRGWC-47**	EPA 300.0	9128		
266580005	**FB-2**	EPA 300.0	9128		
266580006	**RB-2**	EPA 300.0	9128		

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 31085 Atlanta, GA 30303 P. 404-506-7239

REPORT TO: Joju Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO#: Jabraham@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED:

	Metals App 3 & 4 (EPA 6010/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 & 228 (SW-846 9315/9320)
CONTAINER TYPE	P	P	P
PRESERVATION	3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App 3 & 4	TDS, Cl, F, SO4	Radium 226 & 228	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
6-27-18	1430	GW		X	BRGWC-27I	4	1	1	2		
6-27-18	1318	GW		X	BRGWC-29I	4	1	1	2		
6-27-18	0955	GW		X	BRGWC-32S	6	1	1	4		+2 Radium
6-27-18	1020	GW		X	BRGWC-47	4	1	1	2		
6-27-18	1545	W		X	FB-2	4	1	1	2		
6-27-18	1535	W		X	RB-2	4	1	1	2		

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

WO# : 266580

266580

SAMPLED BY AND TITLE: William Ballow / Geologist | DATE/TIME: 6-27-18 / 1800 | RELINQUISHED BY: [signature] | DATE/TIME: 6-28-18 / 0300

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: [signature] | DATE/TIME: 06/28/18 1015

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

pH checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: Min: 0.5 Max: | Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered Into LIMS:
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#:266580

PM: BM Due Date: 07/06/18

CLIENT: GAPower-CCR

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 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/28/18 MR

Comments:

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 27, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 266582

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 266582

Pennsylvania Certification IDs

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
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 266582

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266582001	**BRGWC-27I**	Water	06/27/18 14:30	06/28/18 10:15
266582002	**BRGWC-29I**	Water	06/27/18 13:18	06/28/18 10:15
266582003	**BRGWC-32S**	Water	06/27/18 09:55	06/28/18 10:15
266582004	**BRGWC-47**	Water	06/27/18 10:20	06/28/18 10:15
266582005	**FB-2**	Water	06/27/18 15:45	06/28/18 10:15
266582006	**RB-2**	Water	06/27/18 15:35	06/28/18 10:15

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 266582

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266582001	**BRGWC-27I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266582002	**BRGWC-29I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266582003	**BRGWC-32S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266582004	**BRGWC-47**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266582005	**FB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266582006	**RB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

Sample: BRGWC-27I **Lab ID: 266582001** Collected: 06/27/18 14:30 Received: 06/28/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.459 ± 0.179 (0.177) C:96% T:NA**	pCi/L	07/09/18 08:13	13982-63-3	
Radium-228	EPA 9320	**0.836 ± 0.660 (1.33) C:68% T:75%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.30 ± 0.839 (1.51)**	pCi/L	07/24/18 11:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

Sample: BRGWC-29I **Lab ID: 266582002** Collected: 06/27/18 13:18 Received: 06/28/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.659 ± 0.236 (0.250) C:90% T:NA**	pCi/L	07/09/18 08:13	13982-63-3	
Radium-228	EPA 9320	**1.000 ± 0.512 (0.926) C:77% T:86%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.66 ± 0.748 (1.18)**	pCi/L	07/24/18 11:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

Sample: BRGWC-32S **Lab ID: 266582003** Collected: 06/27/18 09:55 Received: 06/28/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.337 ± 0.163 (0.196) C:88% T:NA**	pCi/L	07/09/18 08:13	13982-63-3	
Radium-228	EPA 9320	**1.00 ± 0.554 (1.03) C:73% T:81%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.34 ± 0.717 (1.23)**	pCi/L	07/24/18 11:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

Sample: BRGWC-47 **Lab ID: 266582004** Collected: 06/27/18 10:20 Received: 06/28/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.318 ± 0.199 (0.332) C:96% T:NA**	pCi/L	07/16/18 09:43	13982-63-3	
Radium-228	EPA 9320	**0.560 ± 0.596 (1.25) C:71% T:86%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.878 ± 0.795 (1.58)**	pCi/L	07/24/18 11:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

Sample: FB-2 **Lab ID: 266582005** Collected: 06/27/18 15:45 Received: 06/28/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.345 ± 0.185 (0.259) C:98% T:NA**	pCi/L	07/16/18 09:44	13982-63-3	
Radium-228	EPA 9320	**0.965 ± 0.539 (1.01) C:75% T:85%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.724 (1.27)**	pCi/L	07/25/18 13:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

Sample: RB-2 **Lab ID: 266582006** Collected: 06/27/18 15:35 Received: 06/28/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.136 ± 0.189 (0.396) C:31% T:NA**	pCi/L	07/17/18 08:13	13982-63-3	
Radium-228	EPA 9320	**0.284 ± 0.616 (1.36) C:75% T:74%**	pCi/L	07/19/18 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.420 ± 0.805 (1.76)**	pCi/L	07/25/18 13:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

QC Batch: 304670 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266582004, 266582005, 266582006

METHOD BLANK: 1490536 Matrix: Water
Associated Lab Samples: 266582004, 266582005, 266582006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.280 ± 0.163 (0.233) C:95% T:NA	pCi/L	07/16/18 09:43	

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
Pace Project No.: 266582

QC Batch: 304503 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266582001, 266582002, 266582003

METHOD BLANK: 1489835 Matrix: Water
Associated Lab Samples: 266582001, 266582002, 266582003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.224 ± 0.132 (0.194) C:96% T:NA	pCi/L	07/09/18 08:06	

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

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266582

QC Batch: 304502 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266582001, 266582002, 266582003, 266582004, 266582005, 266582006

METHOD BLANK: 1489833 Matrix: Water
Associated Lab Samples: 266582001, 266582002, 266582003, 266582004, 266582005, 266582006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.518 ± 0.408 (0.794) C:78% T:66%	pCi/L	07/19/18 15:40	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 266582

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 266582

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266582001	**BRGWC-27I**	EPA 9315	304503		
266582002	**BRGWC-29I**	EPA 9315	304503		
266582003	**BRGWC-32S**	EPA 9315	304503		
266582004	**BRGWC-47**	EPA 9315	304670		
266582005	**FB-2**	EPA 9315	304670		
266582006	**RB-2**	EPA 9315	304670		
266582001	**BRGWC-27I**	EPA 9320	304502		
266582002	**BRGWC-29I**	EPA 9320	304502		
266582003	**BRGWC-32S**	EPA 9320	304502		
266582004	**BRGWC-47**	EPA 9320	304502		
266582005	**FB-2**	EPA 9320	304502		
266582006	**RB-2**	EPA 9320	304502		
266582001	**BRGWC-27I**	Total Radium Calculation	306895		
266582002	**BRGWC-29I**	Total Radium Calculation	306895		
266582003	**BRGWC-32S**	Total Radium Calculation	306895		
266582004	**BRGWC-47**	Total Radium Calculation	306895		
266582005	**FB-2**	Total Radium Calculation	306983		
266582006	**RB-2**	Total Radium Calculation	306983		

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 31085 Atlanta, GA 30308 P 404-506-7239

REPORT TO: Joju Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: Jabraha@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED:
- Metals App 3 & 4 (EPA 6010/7470) — Container type: P; Preservation: 3
- TDS, Cl, F, SO4 (EPA 300.0 & SM2540C) — Container type: P; Preservation: 7
- Radium 226 & 228 (SW 846 9315/9320) — Container type: P; Preservation: 3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App 3 & 4	TDS, Cl, F, SO4	Radium 226 & 228	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
6-27-18	1430	GW		X	BRGWC-27I	4	1	1	2		
6-27-18	1318	GW		X	BRGWC-24I	4	1	1	2		
6-27-18	0955	GW		X	BRGWC-32S	6	1	1	4		+2 Radium
6-27-18	1020	GW		X	BRGWC-47	4	1	1	2		
6-27-18	1545	W		X	FB-2	4	1	1	2		
6-27-18	1535	W		X	RB-2	4	1	1	2		

CONTAINER TYPE
- P - PLASTIC
- A - AMBER GLASS
- G - CLEAR GLASS
- V - VOA VIAL
- S - STERILE
- O - OTHER

PRESERVATION
- 1 - HCl, ≤6°C
- 2 - H_2SO_4, ≤6°C
- 3 - HNO_3
- 4 - NaOH, ≤6°C
- 5 - NaOH/ZnAc, ≤6°C
- 6 - $Na_2S_2O_3$, ≤6°C
- 7 - ≤6°C not frozen

***MATRIX CODES:**
- DW - DRINKING WATER
- WW - WASTEWATER
- GW - GROUNDWATER
- SW - SURFACE WATER
- ST - STORM WATER
- W - WATER
- S - SOIL
- SL - SLUDGE
- SD - SOLID
- A - AIR
- L - LIQUID
- P - PRODUCT

WO#: 266582
266582

SAMPLED BY AND TITLE: William Ballow / Geologist | DATE/TIME: 6-27-18 / 1800 | RELINQUISHED BY: [signature] | DATE/TIME: 6-28-18 / 0300

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: [signature] | DATE/TIME: 06/28/18 1015 | SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

pH checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: Min: 0.5 Max: | Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266582

PM: BM **Due Date: 07/27/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/28/18 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 10, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 266665

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 266665

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 266665

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266665001	**BRGWC-30I**	Water	06/28/18 08:45	06/29/18 10:15
266665002	**BRGWC-45**	Water	06/28/18 11:05	06/29/18 10:15
266665003	**BRGWC-50**	Water	06/28/18 09:55	06/29/18 10:15

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 266665

Lab ID	Sample ID	Method	Analysts	Analytes Reported
266665001	**BRGWC-30I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266665002	**BRGWC-45**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266665003	**BRGWC-50**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266665

Sample: BRGWC-30I **Lab ID: 266665001** Collected: 06/28/18 08:45 Received: 06/29/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/02/18 09:21	07/02/18 19:48	7440-36-0	
Arsenic	**0.00073J**	mg/L	0.0050	0.00057	1	07/02/18 09:21	07/02/18 19:48	7440-38-2	
Barium	**0.023**	mg/L	0.010	0.00078	1	07/02/18 09:21	07/02/18 19:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/02/18 09:21	07/02/18 19:48	7440-41-7	
Boron	**1.4**	mg/L	0.040	0.0039	1	07/02/18 09:21	07/02/18 19:48	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/02/18 09:21	07/02/18 19:48	7440-43-9	
Calcium	**73.3**	mg/L	25.0	0.69	50	07/02/18 09:21	07/02/18 19:54	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/02/18 09:21	07/02/18 19:48	7440-47-3	
Cobalt	**0.00078J**	mg/L	0.010	0.00052	1	07/02/18 09:21	07/02/18 19:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/02/18 09:21	07/02/18 19:48	7439-92-1	
Lithium	**0.013J**	mg/L	0.050	0.00097	1	07/02/18 09:21	07/02/18 19:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/02/18 09:21	07/02/18 19:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/02/18 09:21	07/02/18 19:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/02/18 09:21	07/02/18 19:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	07/03/18 08:20	07/03/18 13:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**494**	mg/L	10.0	10.0	1		07/03/18 14:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.0**	mg/L	0.25	0.024	1		07/03/18 21:42	16887-00-6	
Fluoride	**0.93**	mg/L	0.30	0.029	1		07/03/18 21:42	16984-48-8	
Sulfate	**276**	mg/L	10.0	0.17	10		07/07/18 18:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266665

Sample: BRGWC-45 **Lab ID: 266665002** Collected: 06/28/18 11:05 Received: 06/29/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/02/18 09:21	07/02/18 20:11	7440-36-0	
Arsenic	**0.0017J**	mg/L	0.0050	0.00057	1	07/02/18 09:21	07/02/18 20:11	7440-38-2	
Barium	**0.067**	mg/L	0.010	0.00078	1	07/02/18 09:21	07/02/18 20:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/02/18 09:21	07/02/18 20:11	7440-41-7	
Boron	**0.025J**	mg/L	0.040	0.0039	1	07/02/18 09:21	07/02/18 20:11	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/02/18 09:21	07/02/18 20:11	7440-43-9	
Calcium	**41.9**	mg/L	25.0	0.69	50	07/02/18 09:21	07/02/18 20:17	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/02/18 09:21	07/02/18 20:11	7440-47-3	
Cobalt	**0.010**	mg/L	0.010	0.00052	1	07/02/18 09:21	07/02/18 20:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/02/18 09:21	07/02/18 20:11	7439-92-1	
Lithium	**0.0028J**	mg/L	0.050	0.00097	1	07/02/18 09:21	07/02/18 20:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/02/18 09:21	07/02/18 20:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/02/18 09:21	07/02/18 20:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/02/18 09:21	07/02/18 20:11	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	07/03/18 08:20	07/03/18 13:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**333**	mg/L	10.0	10.0	1		07/03/18 14:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**50.2**	mg/L	1.2	0.12	5		07/07/18 18:30	16887-00-6	
Fluoride	**0.69**	mg/L	0.30	0.029	1		07/03/18 22:03	16984-48-8	
Sulfate	**109**	mg/L	5.0	0.085	5		07/07/18 18:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 266665

Sample: BRGWC-50 **Lab ID: 266665003** Collected: 06/28/18 09:55 Received: 06/29/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/02/18 09:21	07/02/18 20:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/02/18 09:21	07/02/18 20:23	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00078	1	07/02/18 09:21	07/02/18 20:23	7440-39-3	
Beryllium	**0.0030J**	mg/L	0.0030	0.000050	1	07/02/18 09:21	07/02/18 20:23	7440-41-7	
Boron	**0.34**	mg/L	0.040	0.0039	1	07/02/18 09:21	07/02/18 20:23	7440-42-8	
Cadmium	**0.087**	mg/L	0.0010	0.000093	1	07/02/18 09:21	07/02/18 20:23	7440-43-9	
Calcium	**242**	mg/L	25.0	0.69	50	07/02/18 09:21	07/02/18 20:29	7440-70-2	
Chromium	**0.0023J**	mg/L	0.010	0.0016	1	07/02/18 09:21	07/02/18 20:23	7440-47-3	
Cobalt	**1.3**	mg/L	0.50	0.026	50	07/02/18 09:21	07/02/18 20:29	7440-48-4	
Lead	**0.00054J**	mg/L	0.0050	0.00027	1	07/02/18 09:21	07/02/18 20:23	7439-92-1	
Lithium	**0.040J**	mg/L	0.050	0.00097	1	07/02/18 09:21	07/02/18 20:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/02/18 09:21	07/02/18 20:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/02/18 09:21	07/02/18 20:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/02/18 09:21	07/02/18 20:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	07/03/18 08:20	07/03/18 13:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2290**	mg/L	10.0	10.0	1		07/03/18 14:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.0**	mg/L	0.25	0.024	1		07/03/18 23:49	16887-00-6	
Fluoride	**1.1**	mg/L	0.30	0.029	1		07/03/18 23:49	16984-48-8	
Sulfate	**1530**	mg/L	50.0	0.85	50		07/07/18 18:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266665

QC Batch: 9168 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 266665001, 266665002, 266665003

METHOD BLANK: 41848 Matrix: Water
Associated Lab Samples: 266665001, 266665002, 266665003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.000040J	0.00020	0.000036	07/03/18 12:29	

LABORATORY CONTROL SAMPLE: 41849

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41850 41851

Parameter	Units	266662001 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	.0025	.0025	0.0025	0.0025	98	100	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266665

QC Batch: 9111 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266665001, 266665002, 266665003

METHOD BLANK: 41720 Matrix: Water
Associated Lab Samples: 266665001, 266665002, 266665003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/02/18 17:41	
Arsenic	mg/L	ND	0.0050	0.00057	07/02/18 17:41	
Barium	mg/L	ND	0.010	0.00078	07/02/18 17:41	
Beryllium	mg/L	ND	0.0030	0.000050	07/02/18 17:41	
Boron	mg/L	ND	0.040	0.0039	07/02/18 17:41	
Cadmium	mg/L	ND	0.0010	0.000093	07/02/18 17:41	
Calcium	mg/L	0.016J	0.50	0.014	07/02/18 17:41	
Chromium	mg/L	ND	0.010	0.0016	07/02/18 17:41	
Cobalt	mg/L	ND	0.010	0.00052	07/02/18 17:41	
Lead	mg/L	ND	0.0050	0.00027	07/02/18 17:41	
Lithium	mg/L	ND	0.050	0.00097	07/02/18 17:41	
Molybdenum	mg/L	ND	0.010	0.0019	07/02/18 17:41	
Selenium	mg/L	ND	0.010	0.0014	07/02/18 17:41	
Thallium	mg/L	ND	0.0010	0.00014	07/02/18 17:41	

LABORATORY CONTROL SAMPLE: 41721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	106	80-120	
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	0.10	100	80-120	
Beryllium	mg/L	.1	0.11	106	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	.1	0.10	102	80-120	
Calcium	mg/L	1	1.1	111	80-120	
Chromium	mg/L	.1	0.10	104	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lead	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.11	107	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41722 41723

Parameter	Units	266662001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	106	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266665

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 41722 41723

Parameter	Units	266662001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.00074J	.1	.1	0.11	0.10	104	104	75-125	0	20	
Barium	mg/L	0.035	.1	.1	0.14	0.14	103	106	75-125	3	20	
Beryllium	mg/L	0.000081J	.1	.1	0.092	0.095	92	95	75-125	3	20	
Boron	mg/L	0.89	1	1	1.8	2.0	95	106	75-125	6	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.11	105	106	75-125	1	20	
Calcium	mg/L	51.0	1	1	52.1	52.7	113	174	75-125	1	20	M6
Chromium	mg/L	0.0076J	.1	.1	0.11	0.11	104	104	75-125	0	20	
Cobalt	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20	
Lithium	mg/L	0.0022J	.1	.1	0.092	0.092	90	90	75-125	0	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.11	105	107	75-125	2	20	
Selenium	mg/L	0.0033J	.1	.1	0.11	0.11	104	104	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	101	103	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266665

QC Batch: 9106 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266665001, 266665002, 266665003

LABORATORY CONTROL SAMPLE: 41707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 41708

Parameter	Units	266622002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	960	986	3	10	

SAMPLE DUPLICATE: 41711

Parameter	Units	266662006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	14.0	15.0	7	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 266665

QC Batch: 9216 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266665001, 266665002, 266665003

METHOD BLANK: 42027 Matrix: Water
Associated Lab Samples: 266665001, 266665002, 266665003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.11J	0.25	0.024	07/03/18 18:10	
Fluoride	mg/L	ND	0.30	0.029	07/03/18 18:10	
Sulfate	mg/L	ND	1.0	0.017	07/03/18 18:10	

LABORATORY CONTROL SAMPLE: 42028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10	100	90-110	
Fluoride	mg/L	10	10.9	109	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 42029 42030

Parameter	Units	266662001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.0	10	10	15.2	15.4	62	64	90-110	1	15	M1
Fluoride	mg/L	0.51	10	10	11.4	11.7	109	112	90-110	2	15	M1
Sulfate	mg/L	284	10	10	199	199	-849	-848	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 42031

Parameter	Units	266662002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.1	10	11.8	97	90-110	
Fluoride	mg/L	ND	10	11.4	114	90-110	M1
Sulfate	mg/L	0.24J	10	10.1	99	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 266665

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 266665

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266665001	**BRGWC-30I**	EPA 3005A	9111	EPA 6020B	9167
266665002	**BRGWC-45**	EPA 3005A	9111	EPA 6020B	9167
266665003	**BRGWC-50**	EPA 3005A	9111	EPA 6020B	9167
266665001	**BRGWC-30I**	EPA 7470A	9168	EPA 7470A	9224
266665002	**BRGWC-45**	EPA 7470A	9168	EPA 7470A	9224
266665003	**BRGWC-50**	EPA 7470A	9168	EPA 7470A	9224
266665001	**BRGWC-30I**	SM 2540C	9106		
266665002	**BRGWC-45**	SM 2540C	9106		
266665003	**BRGWC-50**	SM 2540C	9106		
266665001	**BRGWC-30I**	EPA 300.0	9216		
266665002	**BRGWC-45**	EPA 300.0	9216		
266665003	**BRGWC-50**	EPA 300.0	9216		

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 31085 Atlanta, GA 30308 P. 404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla

REQUESTED COMPLETION DATE: —

PO #: lubrahe@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS			metals App3 & 4 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB I.D. NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:				P	P	P							
					PRESERVATION:				3	7	3							
6-28-18	0845	GW		X	BRGWC-30I	6	...		1	1	4							+2 Radium
6-28-18	1105	GW		X	BRGWC-45	4			1	1	2							
6-28-18	0955	GW		X	BRGWC-50	4			1	1	2							

CONTAINER TYPE:
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

WO#: 266665

266665

SAMPLED BY AND TITLE: Travis Martinez / Scientist | DATE/TIME: 6-28-18 / 1800

RELINQUISHED BY: [signature] | DATE/TIME: 6-29-18 / 0800

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: M Zahman [signature] | DATE/TIME: 06/29/18 1015

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS

# of Coolers: | Cooler ID:

pH checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: Min: 1.8 Max: | Custody Seal: (Intact) Broken Not Present N/A

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266665

PM: BM Due Date: 07/09/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.8 Biological Tissue is Frozen: Yes No Date and Initials of person examining contents: 6/29/18 MK

Temp should be above freezing to 6°C

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

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Field Data Required? Y N

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 DENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 30, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 266666

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 266666

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 266666

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266666001	**BRGWC-30I**	Water	06/28/18 08:45	06/29/18 10:15
266666002	**BRGWC-45**	Water	06/28/18 11:05	06/29/18 10:15
266666003	**BRGWC-50**	Water	06/28/18 09:55	06/29/18 10:15

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 266666

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266666001	**BRGWC-30I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
266666002	**BRGWC-45**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
266666003	**BRGWC-50**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266666

Sample: BRGWC-30I **Lab ID: 266666001** Collected: 06/28/18 08:45 Received: 06/29/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.540 ± 0.212 (0.217) C:90% T:NA**	pCi/L	07/17/18 08:14	13982-63-3	
Radium-228	EPA 9320	**0.864 ± 0.417 (0.713) C:72% T:87%**	pCi/L	07/24/18 12:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.40 ± 0.629 (0.930)**	pCi/L	07/25/18 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266666

Sample: BRGWC-45 **Lab ID: 266666002** Collected: 06/28/18 11:05 Received: 06/29/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.283 ± 0.183 (0.305) C:81% T:NA**	pCi/L	07/17/18 08:14	13982-63-3	
Radium-228	EPA 9320	**-0.0786 ± 0.611 (1.45) C:66% T:74%**	pCi/L	07/24/18 18:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.283 ± 0.794 (1.76)**	pCi/L	07/25/18 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266666

Sample: BRGWC-50 **Lab ID: 266666003** Collected: 06/28/18 09:55 Received: 06/29/18 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.455 ± 0.186 (0.184) C:97% T:NA**	pCi/L	07/17/18 08:14	13982-63-3	
Radium-228	EPA 9320	**0.582 ± 0.585 (1.21) C:70% T:80%**	pCi/L	07/24/18 18:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.771 (1.39)**	pCi/L	07/25/18 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266666

QC Batch: 304670 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266666001, 266666002, 266666003

METHOD BLANK: 1490536 Matrix: Water
Associated Lab Samples: 266666001, 266666002, 266666003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.280 ± 0.163 (0.233) C:95% T:NA	pCi/L	07/16/18 09:43	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 266666

QC Batch: 304671 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266666001, 266666002, 266666003

METHOD BLANK: 1490537 Matrix: Water
Associated Lab Samples: 266666001, 266666002, 266666003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	1.09 ± 0.430 (0.652) C:77% T:86%	pCi/L	07/24/18 12:59	1A

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 266666

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

ANALYTE QUALIFIERS

1A	Ra-228 Method blank activity greater than the RL of 1.0 pCi/L. Sample results less than the CRDL are reportable without qualification.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 266666

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266666001	**BRGWC-30I**	EPA 9315	304670		
266666002	**BRGWC-45**	EPA 9315	304670		
266666003	**BRGWC-50**	EPA 9315	304670		
266666001	**BRGWC-30I**	EPA 9320	304671		
266666002	**BRGWC-45**	EPA 9320	304671		
266666003	**BRGWC-50**	EPA 9320	304671		
266666001	**BRGWC-30I**	Total Radium Calculation	307149		
266666002	**BRGWC-45**	Total Radium Calculation	307149		
266666003	**BRGWC-50**	Total Radium Calculation	307149		

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE 30308
Atlanta, GA 30303 P 404-506-7231

REPORT TO: Jay Ahlum | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: lahlum@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals, App III & IV (EPA 6010/7470)	TDS, Cl, F, SO4 (EPA 300.0 / SM2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
6-28-18	0845	GW		X	BRGWI-30I	6	1	1	4		+2 Radium
6-28-18	1105	GW		X	BRGWC-45	4	1	1	2		
6-28-18	0955	GW		X	BRGWC-50	4	1	1	2		

WO#: 266666

266666

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: Travis Martinez / Scientist | DATE/TIME: 6-28-18 / 1800 | RELINQUISHED BY: [signature] | DATE/TIME: 6-29-18 / 0800

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: Graham | DATE/TIME: 06/29/18 1015 | SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 1.8 Max: | Custody Seal: Intact Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 266666

PM: BM **Due Date: 07/30/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.8 **Biological Tissue is Frozen:** Yes No

Date and Initials of person examining contents: 6/29/18 MK

Temp should be above freezing to 6°C

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

Client Notification/ Resolution:

Person Contacted: Date/Time:

Comments/ Resolution:

Field Data Required? Y N

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 DENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

LABORATORY ANALYTICAL DATA

August 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 10, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 267818

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on August 03, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 267818

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 267818

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267818001	**PZ-45**	Water	07/31/18 15:30	08/03/18 09:45
267818002	**PZ-47**	Water	08/01/18 10:10	08/03/18 09:45
267818003	**PZ-50**	Water	08/01/18 13:20	08/03/18 09:45
267818004	**FB-1**	Water	08/01/18 09:45	08/03/18 09:45

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 267818

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267818001	**PZ-45**	EPA 6020B	CSW, KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267818002	**PZ-47**	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267818003	**PZ-50**	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267818004	**FB-1**	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 267818

Sample: PZ-45 **Lab ID: 267818001** Collected: 07/31/18 15:30 Received: 08/03/18 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	08/07/18 12:49	08/08/18 16:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/07/18 12:49	08/08/18 16:31	7440-38-2	
Barium	**0.087**	mg/L	0.010	0.00078	1	08/07/18 12:49	08/08/18 16:31	7440-39-3	M1
Beryllium	ND	mg/L	0.015	0.00025	5	08/07/18 12:49	08/10/18 13:07	7440-41-7	
Boron	**0.035J**	mg/L	0.20	0.020	5	08/07/18 12:49	08/10/18 13:07	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/07/18 12:49	08/08/18 16:31	7440-43-9	
Calcium	**41.5**	mg/L	2.5	0.069	5	08/07/18 12:49	08/10/18 13:07	7440-70-2	M1
Chromium	ND	mg/L	0.010	0.0016	1	08/07/18 12:49	08/08/18 16:31	7440-47-3	
Cobalt	**0.0098J**	mg/L	0.010	0.00052	1	08/07/18 12:49	08/08/18 16:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/07/18 12:49	08/08/18 16:31	7439-92-1	
Lithium	ND	mg/L	0.25	0.0049	5	08/07/18 12:49	08/10/18 13:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/07/18 12:49	08/08/18 16:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/07/18 12:49	08/08/18 16:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/07/18 12:49	08/08/18 16:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/07/18 12:40	08/07/18 17:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**393**	mg/L	25.0	10.0	1		08/03/18 15:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**59.0**	mg/L	2.5	0.24	10		08/03/18 19:41	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		08/03/18 19:20	16984-48-8	
Sulfate	**107**	mg/L	10.0	0.17	10		08/03/18 19:41	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 267818

Sample: PZ-47 **Lab ID: 267818002** Collected: 08/01/18 10:10 Received: 08/03/18 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	08/07/18 12:49	08/08/18 17:44	7440-36-0	
Arsenic	**0.0028J**	mg/L	0.0050	0.00057	1	08/07/18 12:49	08/08/18 17:44	7440-38-2	
Barium	**0.043**	mg/L	0.010	0.00078	1	08/07/18 12:49	08/08/18 17:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/07/18 12:49	08/08/18 17:44	7440-41-7	
Boron	**0.39**	mg/L	0.040	0.0039	1	08/07/18 12:49	08/08/18 17:44	7440-42-8	
Cadmium	**0.00011J**	mg/L	0.0010	0.000093	1	08/07/18 12:49	08/08/18 17:44	7440-43-9	
Calcium	**358**	mg/L	25.0	0.69	50	08/07/18 12:49	08/08/18 17:50	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/07/18 12:49	08/08/18 17:44	7440-47-3	
Cobalt	**0.0040J**	mg/L	0.010	0.00052	1	08/07/18 12:49	08/08/18 17:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/07/18 12:49	08/08/18 17:44	7439-92-1	
Lithium	**0.039J**	mg/L	0.050	0.00097	1	08/07/18 12:49	08/08/18 17:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/07/18 12:49	08/08/18 17:44	7439-98-7	
Selenium	**0.0015J**	mg/L	0.010	0.0014	1	08/07/18 12:49	08/08/18 17:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/07/18 12:49	08/08/18 17:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/07/18 12:40	08/07/18 17:49	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2190**	mg/L	25.0	10.0	1		08/03/18 15:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.2**	mg/L	0.25	0.024	1		08/03/18 20:43	16887-00-6	
Fluoride	**0.48**	mg/L	0.30	0.029	1		08/03/18 20:43	16984-48-8	
Sulfate	**1560**	mg/L	100	1.7	100		08/03/18 21:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 267818

Sample: PZ-50 **Lab ID: 267818003** Collected: 08/01/18 13:20 Received: 08/03/18 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	08/07/18 12:49	08/08/18 17:55	7440-36-0	
Arsenic	**0.00074J**	mg/L	0.0050	0.00057	1	08/07/18 12:49	08/08/18 17:55	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	08/07/18 12:49	08/08/18 17:55	7440-39-3	
Beryllium	**0.0025J**	mg/L	0.0030	0.000050	1	08/07/18 12:49	08/08/18 17:55	7440-41-7	
Boron	**0.28**	mg/L	0.040	0.0039	1	08/07/18 12:49	08/08/18 17:55	7440-42-8	
Cadmium	**0.042**	mg/L	0.0010	0.000093	1	08/07/18 12:49	08/08/18 17:55	7440-43-9	
Calcium	**246**	mg/L	25.0	0.69	50	08/07/18 12:49	08/08/18 18:01	7440-70-2	
Chromium	**0.0046J**	mg/L	0.010	0.0016	1	08/07/18 12:49	08/08/18 17:55	7440-47-3	
Cobalt	**1.4**	mg/L	0.50	0.026	50	08/07/18 12:49	08/08/18 18:01	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/07/18 12:49	08/08/18 17:55	7439-92-1	
Lithium	**0.036J**	mg/L	0.050	0.00097	1	08/07/18 12:49	08/08/18 17:55	7439-93-2	
Molybdenum	**0.0033J**	mg/L	0.010	0.0019	1	08/07/18 12:49	08/08/18 17:55	7439-98-7	
Selenium	**0.0031J**	mg/L	0.010	0.0014	1	08/07/18 12:49	08/08/18 17:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/07/18 12:49	08/08/18 17:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/07/18 12:40	08/07/18 17:51	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2360**	mg/L	25.0	10.0	1		08/03/18 15:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**25.7**	mg/L	0.25	0.024	1		08/03/18 21:24	16887-00-6	
Fluoride	**2.0**	mg/L	0.30	0.029	1		08/03/18 21:24	16984-48-8	
Sulfate	**1580**	mg/L	50.0	0.85	50		08/03/18 21:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 267818

Sample: FB-1 **Lab ID: 267818004** Collected: 08/01/18 09:45 Received: 08/03/18 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	08/07/18 12:49	08/08/18 18:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/07/18 12:49	08/08/18 18:07	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	08/07/18 12:49	08/08/18 18:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/07/18 12:49	08/08/18 18:07	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	08/07/18 12:49	08/08/18 18:07	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/07/18 12:49	08/08/18 18:07	7440-43-9	
Calcium	**0.018J**	mg/L	0.50	0.014	1	08/07/18 12:49	08/08/18 18:07	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/07/18 12:49	08/08/18 18:07	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/07/18 12:49	08/08/18 18:07	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/07/18 12:49	08/08/18 18:07	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	08/07/18 12:49	08/08/18 18:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/07/18 12:49	08/08/18 18:07	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/07/18 12:49	08/08/18 18:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/07/18 12:49	08/08/18 18:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/07/18 12:40	08/07/18 17:53	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/03/18 15:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.076J**	mg/L	0.25	0.024	1		08/03/18 22:05	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		08/03/18 22:05	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		08/03/18 22:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 267818

QC Batch: 11249 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

METHOD BLANK: 50678 Matrix: Water
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	08/07/18 17:34	

LABORATORY CONTROL SAMPLE: 50679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50680 50681

Parameter	Units	267818001 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	.0025	.0025	0.0026	0.0027	104	106	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 267818

QC Batch: 11250 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

METHOD BLANK: 50682 Matrix: Water
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/08/18 16:20	
Arsenic	mg/L	ND	0.0050	0.00057	08/08/18 16:20	
Barium	mg/L	ND	0.010	0.00078	08/08/18 16:20	
Beryllium	mg/L	ND	0.0030	0.000050	08/08/18 16:20	
Boron	mg/L	ND	0.040	0.0039	08/08/18 16:20	
Cadmium	mg/L	ND	0.0010	0.000093	08/08/18 16:20	
Calcium	mg/L	ND	0.50	0.014	08/08/18 16:20	
Chromium	mg/L	ND	0.010	0.0016	08/08/18 16:20	
Cobalt	mg/L	ND	0.010	0.00052	08/08/18 16:20	
Lead	mg/L	ND	0.0050	0.00027	08/08/18 16:20	
Lithium	mg/L	ND	0.050	0.00097	08/08/18 16:20	
Molybdenum	mg/L	ND	0.010	0.0019	08/08/18 16:20	
Selenium	mg/L	ND	0.010	0.0014	08/08/18 16:20	
Thallium	mg/L	ND	0.0010	0.00014	08/08/18 16:20	

LABORATORY CONTROL SAMPLE: 50683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.099	99	80-120	
Barium	mg/L	.1	0.096	96	80-120	
Beryllium	mg/L	.1	0.10	102	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	.1	0.10	101	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Chromium	mg/L	.1	0.10	101	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lead	mg/L	.1	0.10	101	80-120	
Lithium	mg/L	.1	0.11	105	80-120	
Molybdenum	mg/L	.1	0.10	100	80-120	
Selenium	mg/L	.1	0.10	100	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50684 50685

Parameter	Units	267818001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.10	0.098	104	98	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 267818

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50684 50685

Parameter	Units	267818001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	.1	.1	0.10	0.10	102	101	75-125	0	20	
Barium	mg/L	0.087	.1	.1	0.24	0.23	153	147	75-125	3	20	M1
Beryllium	mg/L	ND	.1	.1	0.094	0.095	94	95	75-125	1	20	
Boron	mg/L	0.035J	1	1	0.98	0.95	94	91	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.098	103	98	75-125	5	20	
Calcium	mg/L	41.5	1	1	41.3	40.2	-28	-138	75-125	3	20	M1
Chromium	mg/L	ND	.1	.1	0.10	0.095	99	95	75-125	5	20	
Cobalt	mg/L	0.0098J	.1	.1	0.11	0.11	98	97	75-125	1	20	
Lead	mg/L	ND	.1	.1	0.097	0.093	97	93	75-125	5	20	
Lithium	mg/L	ND	.1	.1	0.098J	0.095J	94	92	75-125		20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.10	105	100	75-125	6	20	
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.099	0.095	99	95	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 267818

QC Batch: 11083 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

LABORATORY CONTROL SAMPLE: 50012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	389	97	84-108	

SAMPLE DUPLICATE: 50013

Parameter	Units	267818001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	393	388	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 267818

QC Batch: 11089 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

METHOD BLANK: 50043 Matrix: Water
Associated Lab Samples: 267818001, 267818002, 267818003, 267818004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	08/03/18 18:39	
Fluoride	mg/L	ND	0.30	0.029	08/03/18 18:39	
Sulfate	mg/L	ND	1.0	0.017	08/03/18 18:39	

LABORATORY CONTROL SAMPLE: 50044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.5	105	90-110	
Fluoride	mg/L	10	10.7	107	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50045 50046

Parameter	Units	267818001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	59.0	10	10	63.2	63.1	42	41	90-110	0	15	E,M1
Fluoride	mg/L	ND	10	10	10.4	10.4	104	104	90-110	0	15	
Sulfate	mg/L	107	10	10	102	102	-50	-51	90-110	0	15	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 267818

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 267818

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267818001	**PZ-45**	EPA 3005A	11250	EPA 6020B	11364
267818002	**PZ-47**	EPA 3005A	11250	EPA 6020B	11364
267818003	**PZ-50**	EPA 3005A	11250	EPA 6020B	11364
267818004	**FB-1**	EPA 3005A	11250	EPA 6020B	11364
267818001	**PZ-45**	EPA 7470A	11249	EPA 7470A	11271
267818002	**PZ-47**	EPA 7470A	11249	EPA 7470A	11271
267818003	**PZ-50**	EPA 7470A	11249	EPA 7470A	11271
267818004	**FB-1**	EPA 7470A	11249	EPA 7470A	11271
267818001	**PZ-45**	SM 2540C	11083		
267818002	**PZ-47**	SM 2540C	11083		
267818003	**PZ-50**	SM 2540C	11083		
267818004	**FB-1**	SM 2540C	11083		
267818001	**PZ-45**	EPA 300.0	11089		
267818002	**PZ-47**	EPA 300.0	11089		
267818003	**PZ-50**	EPA 300.0	11089		
267818004	**FB-1**	EPA 300.0	11089		

CHAIN OF CUSTODY RECORD

Pace Analytical®
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3&7	7	3&7							
07/31/18	1530	GW		x	PZ-45	4		1	1	2							
08/01/18	1010	GW		x	PZ-47	4		1	1	2							
08/01/18	1320	GW		x	PZ-50	4		1	1	2							
08/01/18	0945	W		x	FB-1	4		1	1	2							

LAB ID NUMBER

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
~~SW - SURFACE WATER~~	~~A - AIR~~
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 267818

267818

SAMPLED BY AND TITLE: Karim Minkara Geologist
DATE/TIME: 8/2/2018

RECEIVED BY:
DATE/TIME:

RECEIVED BY LAB: Rachel Kirkman
DATE/TIME: 08/03/18 0945

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.2 Max:

RELINQUISHED BY:
DATE/TIME: 8/2/18 1700

RELINQUISHED BY:
DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 267818

PM: BM **Due Date: 08/10/18**

CLIENT: GAPower-CCR

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 782124473256

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/3/18 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 30, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 267819

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on August 03, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 267819

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 267819

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267819001	**PZ-45**	Water	07/31/18 15:30	08/03/18 09:45
267819002	**PZ-47**	Water	08/01/18 10:10	08/03/18 09:45
267819003	**PZ-50**	Water	08/01/18 13:20	08/03/18 09:45
267819004	**FB-1**	Water	08/01/18 09:45	08/03/18 09:45

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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 267819

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267819001	**PZ-45**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267819002	**PZ-47**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267819003	**PZ-50**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267819004	**FB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 267819

Sample: PZ-45 **Lab ID: 267819001** Collected: 07/31/18 15:30 Received: 08/03/18 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.149 ± 0.109 (0.188) C:84% T:NA**	pCi/L	08/22/18 16:23	13982-63-3	
Radium-228	EPA 9320	**0.0939 ± 0.324 (0.735) C:70% T:81%**	pCi/L	08/23/18 10:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.243 ± 0.433 (0.923)**	pCi/L	08/27/18 13:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 267819

Sample: PZ-47 **Lab ID: 267819002** Collected: 08/01/18 10:10 Received: 08/03/18 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.224 ± 0.126 (0.203) C:86% T:NA**	pCi/L	08/22/18 16:23	13982-63-3	
Radium-228	EPA 9320	**0.414 ± 0.349 (0.693) C:71% T:81%**	pCi/L	08/23/18 10:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.638 ± 0.475 (0.896)**	pCi/L	08/27/18 13:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 267819

Sample: PZ-50 **Lab ID: 267819003** Collected: 08/01/18 13:20 Received: 08/03/18 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.462 ± 0.163 (0.201) C:83% T:NA**	pCi/L	08/22/18 16:23	13982-63-3	
Radium-228	EPA 9320	**1.21 ± 0.524 (0.853) C:73% T:73%**	pCi/L	08/23/18 10:47	15262-20-1	1A
Total Radium	Total Radium Calculation	**1.67 ± 0.687 (1.05)**	pCi/L	08/27/18 13:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 267819

Sample: FB-1 **Lab ID: 267819004** Collected: 08/01/18 09:45 Received: 08/03/18 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0807 ± 0.0807 (0.148) C:91% T:NA**	pCi/L	08/22/18 16:23	13982-63-3	
Radium-228	EPA 9320	**-0.152 ± 0.363 (0.881) C:75% T:74%**	pCi/L	08/23/18 14:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.0807 ± 0.444 (1.03)**	pCi/L	08/27/18 13:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 267819

QC Batch: 309688 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 267819001, 267819002, 267819003, 267819004

METHOD BLANK: 1513132 Matrix: Water
Associated Lab Samples: 267819001, 267819002, 267819003, 267819004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.101 ± 0.101 (0.190) C:90% T:NA	pCi/L	08/22/18 16:23	

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

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 267819

QC Batch: 309687 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 267819001, 267819002, 267819003, 267819004

METHOD BLANK: 1513131 Matrix: Water
Associated Lab Samples: 267819001, 267819002, 267819003, 267819004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.429 ± 0.382 (0.771) C:76% T:72%	pCi/L	08/23/18 10:47	

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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Peachtree Corners, GA 30092
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QUALIFIERS

Project: Plant Branch
Pace Project No.: 267819

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

ANALYTE QUALIFIERS

1A	The Ra-228 LCS Duplicate recovery is high and outside of the default acceptance criteria for LCS recovery at 141.83%. The LCS recovery and LCS/LCSD RPD were both acceptable. Results for sample 267819003 may be qualified as high.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 267819

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267819001	**PZ-45**	EPA 9315	309688		
267819002	**PZ-47**	EPA 9315	309688		
267819003	**PZ-50**	EPA 9315	309688		
267819004	**FB-1**	EPA 9315	309688		
267819001	**PZ-45**	EPA 9320	309687		
267819002	**PZ-47**	EPA 9320	309687		
267819003	**PZ-50**	EPA 9320	309687		
267819004	**FB-1**	EPA 9320	309687		
267819001	**PZ-45**	Total Radium Calculation	311018		
267819002	**PZ-47**	Total Radium Calculation	311018		
267819003	**PZ-50**	Total Radium Calculation	311018		
267819004	**FB-1**	Total Radium Calculation	311018		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3&7	7	3&7						
07/31/18	1530	GW		x	PZ-45	4		1	1	2						
08/01/18	1010	GW		x	PZ-47	4		1	1	2						
08/01/18	1320	GW		x	PZ-50	4		1	1	2						
08/01/18	0945	W		x	FB-1	4		1	1	2						

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 267819

267819

SAMPLED BY AND TITLE: Karim Minkara Geologist
DATE/TIME: 8/2/2018

RELINQUISHED BY:
DATE/TIME: 8/2/18 1700

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 08/03/18 0945

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.2 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 267819

PM: BM **Due Date: 08/31/18**

CLIENT: GAPower-CCR

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 7821 2447 3256

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Thermometer Used: 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/3/18 MR

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 17, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 268107

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on August 10, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 268107

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 268107

Lab ID	Sample ID	Matrix	Date Collected	Date Received
268107001	**PZ-52I**	Water	08/10/18 08:50	08/10/18 12:30
268107002	**EB-1**	Water	08/10/18 10:00	08/10/18 12:30

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 268107

Lab ID	Sample ID	Method	Analysts	Analytes Reported
268107001	**PZ-52I**	EPA 6020B	CSW	19
		EPA 6020B	CSW	2
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
268107002	**EB-1**	EPA 6020B	CSW	19
		EPA 6020B	CSW	2
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 268107

Sample: PZ-52I **Lab ID: 268107001** Collected: 08/10/18 08:50 Received: 08/10/18 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	08/13/18 12:38	08/14/18 16:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/13/18 12:38	08/14/18 16:09	7440-38-2	
Barium	**0.038**	mg/L	0.010	0.00078	1	08/13/18 12:38	08/14/18 16:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/13/18 12:38	08/14/18 16:09	7440-41-7	
Boron	**1.3**	mg/L	0.040	0.0039	1	08/13/18 12:38	08/14/18 16:09	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/13/18 12:38	08/14/18 16:09	7440-43-9	
Calcium	**410**	mg/L	25.0	0.69	50	08/13/18 12:38	08/14/18 16:15	7440-70-2	
Chromium	**0.0017J**	mg/L	0.010	0.0016	1	08/13/18 12:38	08/14/18 16:09	7440-47-3	
Cobalt	**0.0043J**	mg/L	0.010	0.00052	1	08/13/18 12:38	08/14/18 16:09	7440-48-4	
Iron	**25.7**	mg/L	2.0	1.1	50	08/13/18 12:38	08/14/18 16:15	7439-89-6	
Lead	ND	mg/L	0.0050	0.00027	1	08/13/18 12:38	08/14/18 16:09	7439-92-1	
Lithium	**0.0087J**	mg/L	0.050	0.00097	1	08/13/18 12:38	08/14/18 16:09	7439-93-2	
Magnesium	**183**	mg/L	2.5	0.31	50	08/13/18 12:38	08/14/18 16:15	7439-95-4	
Manganese	**12.3**	mg/L	0.50	0.058	50	08/13/18 12:38	08/14/18 16:15	7439-96-5	
Molybdenum	**0.0032J**	mg/L	0.010	0.0019	1	08/13/18 12:38	08/14/18 16:09	7439-98-7	
Potassium	**64.1**	mg/L	5.0	1.8	50	08/13/18 12:38	08/14/18 16:15	7440-09-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/13/18 12:38	08/14/18 16:09	7782-49-2	
Sodium	**255**	mg/L	5.0	0.75	50	08/13/18 12:38	08/14/18 16:15	7440-23-5	
Thallium	ND	mg/L	0.0010	0.00014	1	08/13/18 12:38	08/14/18 16:09	7440-28-0	
6020B MET ICPMS, Dissolved	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Iron, Dissolved	**2.0**	mg/L	0.040	0.023	1	08/13/18 12:38	08/13/18 18:27	7439-89-6	
Manganese, Dissolved	**1.1**	mg/L	0.050	0.0058	5	08/13/18 12:38	08/15/18 13:02	7439-96-5	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/13/18 10:27	08/14/18 11:30	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**60.0**	mg/L	20.0	20.0	1		08/13/18 11:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		08/13/18 11:19		
Alkalinity, Total as CaCO3	**60.0**	mg/L	20.0	20.0	1		08/13/18 11:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**344**	mg/L	25.0	10.0	1		08/13/18 14:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.9**	mg/L	0.25	0.024	1		08/15/18 02:39	16887-00-6	
Fluoride	**1.6**	mg/L	0.30	0.029	1		08/15/18 02:39	16984-48-8	
Sulfate	**183**	mg/L	10.0	0.17	10		08/17/18 03:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 268107

Sample: EB-1 **Lab ID: 268107002** Collected: 08/10/18 10:00 Received: 08/10/18 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	08/13/18 12:38	08/14/18 16:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/13/18 12:38	08/14/18 16:27	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	08/13/18 12:38	08/14/18 16:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/13/18 12:38	08/14/18 16:27	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	08/13/18 12:38	08/14/18 16:27	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/13/18 12:38	08/14/18 16:27	7440-43-9	
Calcium	**0.021J**	mg/L	0.50	0.014	1	08/13/18 12:38	08/14/18 16:27	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/13/18 12:38	08/14/18 16:27	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/13/18 12:38	08/14/18 16:27	7440-48-4	
Iron	ND	mg/L	0.040	0.023	1	08/13/18 12:38	08/14/18 16:27	7439-89-6	
Lead	ND	mg/L	0.0050	0.00027	1	08/13/18 12:38	08/14/18 16:27	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	08/13/18 12:38	08/14/18 16:27	7439-93-2	
Magnesium	ND	mg/L	0.050	0.0062	1	08/13/18 12:38	08/14/18 16:27	7439-95-4	
Manganese	ND	mg/L	0.010	0.0012	1	08/13/18 12:38	08/14/18 16:27	7439-96-5	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/13/18 12:38	08/14/18 16:27	7439-98-7	
Potassium	ND	mg/L	0.10	0.035	1	08/13/18 12:38	08/14/18 16:27	7440-09-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/13/18 12:38	08/14/18 16:27	7782-49-2	
Sodium	ND	mg/L	0.10	0.015	1	08/13/18 12:38	08/14/18 16:27	7440-23-5	
Thallium	ND	mg/L	0.0010	0.00014	1	08/13/18 12:38	08/14/18 16:27	7440-28-0	
6020B MET ICPMS, Dissolved	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Iron, Dissolved	ND	mg/L	0.040	0.023	1	08/13/18 12:38	08/13/18 18:55	7439-89-6	
Manganese, Dissolved	ND	mg/L	0.010	0.0012	1	08/13/18 12:38	08/13/18 18:55	7439-96-5	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/13/18 10:27	08/14/18 11:32	7439-97-6	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		08/14/18 11:18		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		08/14/18 11:18		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		08/14/18 11:18		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**11.0J**	mg/L	25.0	10.0	1		08/13/18 14:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.11J**	mg/L	0.25	0.024	1		08/15/18 02:59	16887-00-6	
Fluoride	**0.042J**	mg/L	0.30	0.029	1		08/15/18 02:59	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		08/15/18 02:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11554 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 268107001, 268107002

METHOD BLANK: 52096 Matrix: Water
Associated Lab Samples: 268107001, 268107002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	08/14/18 10:31	

LABORATORY CONTROL SAMPLE: 52097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52098 52099

Parameter	Units	267950001 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	.0025	.0025	0.0024	0.0023	97	92	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11603 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 268107001, 268107002

METHOD BLANK: 52179 Matrix: Water
Associated Lab Samples: 268107001, 268107002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/14/18 12:55	
Arsenic	mg/L	ND	0.0050	0.00057	08/14/18 12:55	
Barium	mg/L	ND	0.010	0.00078	08/14/18 12:55	
Beryllium	mg/L	ND	0.0030	0.000050	08/14/18 12:55	
Boron	mg/L	ND	0.040	0.0039	08/14/18 12:55	
Cadmium	mg/L	ND	0.0010	0.000093	08/14/18 12:55	
Calcium	mg/L	ND	0.50	0.014	08/14/18 12:55	
Chromium	mg/L	ND	0.010	0.0016	08/14/18 12:55	
Cobalt	mg/L	ND	0.010	0.00052	08/14/18 12:55	
Iron	mg/L	ND	0.040	0.023	08/14/18 12:55	
Lead	mg/L	ND	0.0050	0.00027	08/14/18 12:55	
Lithium	mg/L	ND	0.050	0.00097	08/14/18 12:55	
Magnesium	mg/L	ND	0.050	0.0062	08/14/18 12:55	
Manganese	mg/L	ND	0.010	0.0012	08/14/18 12:55	
Molybdenum	mg/L	ND	0.010	0.0019	08/14/18 12:55	
Potassium	mg/L	ND	0.10	0.035	08/14/18 12:55	
Selenium	mg/L	ND	0.010	0.0014	08/14/18 12:55	
Sodium	mg/L	ND	0.10	0.015	08/14/18 12:55	
Thallium	mg/L	ND	0.0010	0.00014	08/14/18 12:55	

LABORATORY CONTROL SAMPLE: 52180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	105	80-120	
Arsenic	mg/L	.1	0.10	101	80-120	
Barium	mg/L	.1	0.096	96	80-120	
Beryllium	mg/L	.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	.1	0.10	103	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Iron	mg/L	1	1.0	104	80-120	
Lead	mg/L	.1	0.10	101	80-120	
Lithium	mg/L	.1	0.099	99	80-120	
Magnesium	mg/L	1	0.97	97	80-120	
Manganese	mg/L	.1	0.11	108	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Potassium	mg/L	1	1.0	100	80-120	
Selenium	mg/L	.1	0.10	101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

LABORATORY CONTROL SAMPLE: 52180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sodium	mg/L	1	1.0	100	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52181 52182

Parameter	Units	268070009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	113	109	75-125	4	20	
Arsenic	mg/L	ND	.1	.1	0.11	0.11	110	106	75-125	4	20	
Barium	mg/L	0.049	.1	.1	0.18	0.18	127	135	75-125	4	20	M1
Beryllium	mg/L	0.000070J	.1	.1	0.090	0.10	90	99	75-125	10	20	
Boron	mg/L	0.017J	1	1	0.91	0.95	89	93	75-125	4	20	
Cadmium	mg/L	ND	.1	.1	0.11	0.10	107	104	75-125	3	20	
Calcium	mg/L	13.4J	1	1	15.0J	14.4J	163	99	75-125	4	20	M6
Chromium	mg/L	ND	.1	.1	0.11	0.11	114	110	75-125	3	20	
Cobalt	mg/L	0.014	.1	.1	0.13	0.12	113	109	75-125	3	20	
Iron	mg/L	ND	1	1	1.2	1.1	114	109	75-125	4	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	3	20	
Lithium	mg/L	0.0031J	.1	.1	0.092	0.10J	89	101	75-125		20	
Magnesium	mg/L	10.4	1	1	14.1	13.6	372	325	75-125	3	20	
Manganese	mg/L	0.0052J	.1	.1	0.12	0.12	116	113	75-125	2	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	113	109	75-125	3	20	
Potassium	mg/L	1.8	1	1	2.6	2.8	86	102	75-125	6	20	
Selenium	mg/L	0.0025J	.1	.1	0.11	0.10	105	101	75-125	4	20	
Sodium	mg/L	9.0	1	1	12.1	11.6	307	255	75-125	4	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	104	101	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11602 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 268107001, 268107002

METHOD BLANK: 52175 Matrix: Water
Associated Lab Samples: 268107001, 268107002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Dissolved	mg/L	ND	0.040	0.023	08/13/18 18:04	
Manganese, Dissolved	mg/L	ND	0.010	0.0012	08/13/18 18:04	

LABORATORY CONTROL SAMPLE: 52176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	mg/L	1	1.0	103	80-120	
Manganese, Dissolved	mg/L	.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52177 52178

Parameter	Units	268107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	mg/L	25.7	1	1	3.0	2.9	98	90	75-125	3	20	
Manganese, Dissolved	mg/L	1.1	.1	.1	1.2	1.2	116	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11563 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 268107001

METHOD BLANK: 52126 Matrix: Water
Associated Lab Samples: 268107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	20.0	08/13/18 10:46	

LABORATORY CONTROL SAMPLE: 52127

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	102	102	85-115	

SAMPLE DUPLICATE: 52128

Parameter	Units	267982001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	45.0	45.0	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11647 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity, Low Level
Associated Lab Samples: 268107002

METHOD BLANK: 52330 Matrix: Water
Associated Lab Samples: 268107002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	1.0	1.0	08/14/18 11:05	

LABORATORY CONTROL SAMPLE: 52331

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.0	98	85-115	

SAMPLE DUPLICATE: 52332

Parameter	Units	268107002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	ND		10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11559 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 268107001, 268107002

LABORATORY CONTROL SAMPLE: 52113

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	84-108	

SAMPLE DUPLICATE: 52114

Parameter	Units	268096003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	14700	14900	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 268107

QC Batch: 11673 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 268107001, 268107002

METHOD BLANK: 52426 Matrix: Water
Associated Lab Samples: 268107001, 268107002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	08/14/18 20:06	
Fluoride	mg/L	ND	0.30	0.029	08/14/18 20:06	
Sulfate	mg/L	ND	1.0	0.017	08/14/18 20:06	

LABORATORY CONTROL SAMPLE: 52427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.8	98	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52428 52429

Parameter	Units	268070001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.8	10	10	13.5	13.4	96	95	90-110	1	15	
Fluoride	mg/L	0.087J	10	10	10	9.8	99	97	90-110	1	15	
Sulfate	mg/L	42.1	10	10	47.4	47.4	53	53	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 52430

Parameter	Units	268070002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	3.9	10	13.0	91	90-110	
Fluoride	mg/L	ND	10	9.8	98	90-110	
Sulfate	mg/L	797	10	384	-4130	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 268107

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 268107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
268107001	**PZ-52I**	EPA 3005A	11603	EPA 6020B	11679
268107002	**EB-1**	EPA 3005A	11603	EPA 6020B	11679
268107001	**PZ-52I**	EPA 3005A	11602	EPA 6020B	11629
268107002	**EB-1**	EPA 3005A	11602	EPA 6020B	11629
268107001	**PZ-52I**	EPA 7470A	11554	EPA 7470A	11621
268107002	**EB-1**	EPA 7470A	11554	EPA 7470A	11621
268107001	**PZ-52I**	SM 2320B	11563		
268107002	**EB-1**	SM 2320B	11647		
268107001	**PZ-52I**	SM 2540C	11559		
268107002	**EB-1**	SM 2540C	11559		
268107001	**PZ-52I**	EPA 300.0	11673		
268107002	**EB-1**	EPA 300.0	11673		

CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III & IV (EPA 6020/7470)	*Metals, Dissolved (EPA 6010/6020) (field filtered) Fe, Mn	*Metals (EPA 6010/6020) Fe, Mn, Ca, Mg, Na, K	Radium 226 & 228 (SW-846 9315/9320)	Carbonate/Bicarbonate Alkalinity SM 2320B	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	LAB ID NUMBER
CONTAINER TYPE:							P	P	P	P	P	P	
PRESERVATION:							3&7	3&7	3&7	3&7	7	7	
08/10/18	0850	GW		x	PZ-52I		X	X	X	X	X	X	
08/10/18	1000	W		x	EB-1		X	X	X	X	X	X	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION
Extra Radium

ATTORNEY CLIENT PRIVILEGE

WO#: 268107
268107

SAMPLED BY AND TITLE: Karim Minkara Geologist
DATE/TIME: 8/10/2018
RELINQUISHED BY: [signature]
DATE/TIME: 8-10-18 1230

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: [signature]
DATE/TIME: 08/10/18 1230
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 4.5 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Plant Branch COC 8.10.2018_KM

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 268107

PM: BM **Due Date: 08/17/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.5 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/10/18 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 31, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 268108

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on August 10, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 268108

Pennsylvania Certification IDs

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
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 268108

Lab ID	Sample ID	Matrix	Date Collected	Date Received
268108001	**PZ-52I**	Water	08/10/18 08:50	08/10/18 12:30
268108002	**EB-1**	Water	08/10/18 10:00	08/10/18 12:30

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 268108

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
268108001	**PZ-52I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
268108002	**EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 268108

Sample: PZ-52I **Lab ID: 268108001** Collected: 08/10/18 08:50 Received: 08/10/18 12:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.609 ± 0.298 (0.379) C:88% T:NA**	pCi/L	08/24/18 08:26	13982-63-3	
Radium-228	EPA 9320	**1.30 ± 0.661 (1.13) C:74% T:76%**	pCi/L	08/27/18 19:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.91 ± 0.959 (1.51)**	pCi/L	08/29/18 11:57	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 268108

Sample: EB-1 **Lab ID: 268108002** Collected: 08/10/18 10:00 Received: 08/10/18 12:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.142 ± 0.124 (0.228) C:96% T:NA**	pCi/L	08/23/18 18:55	13982-63-3	
Radium-228	EPA 9320	**0.413 ± 0.419 (0.863) C:73% T:78%**	pCi/L	08/27/18 16:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.555 ± 0.543 (1.09)**	pCi/L	08/29/18 11:57	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 268108

QC Batch: 310120 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 268108001, 268108002

METHOD BLANK: 1515356 Matrix: Water
Associated Lab Samples: 268108001, 268108002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.667 ± 0.392 (0.705) C:76% T:80%	pCi/L	08/27/18 16:38	

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

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 268108

QC Batch: 310356 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 268108001, 268108002

METHOD BLANK: 1516172 Matrix: Water
Associated Lab Samples: 268108001, 268108002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0838 ± 0.0900 (0.171) C:99% T:NA	pCi/L	08/23/18 18:14	

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: Plant Branch
Pace Project No.: 268108

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 268108

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
268108001	**PZ-52I**	EPA 9315	310356		
268108002	**EB-1**	EPA 9315	310356		
268108001	**PZ-52I**	EPA 9320	310120		
268108002	**EB-1**	EPA 9320	310120		
268108001	**PZ-52I**	Total Radium Calculation	311318		
268108002	**EB-1**	Total Radium Calculation	311318		

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	*Metals, Dissolved (EPA 6010/6020) (field filtered) Fe, Mn	*Metals (EPA 6010/6020) Fe, Mn, Ca, Mg, Na, K	Radium 226 & 228 (SW-846 9315/9320)	Carbonate/Bicarbonate Alkalinity SM 2320B	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	LAB ID NUMBER
CONTAINER TYPE							P	P	P	P	P	P	
PRESERVATION							3&7	3&7	3&7	3&7	7	7	
08/10/18	0850	GW		x	PZ-52I		X	X	X	X	X	X	
08/10/18	1000	W		x	EB-1		X	X	X	X	X	X	

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

Extra Radium

ATTORNEY CLIENT PRIVILEGE

WO#: 268108

268108

SAMPLED BY AND TITLE: Karim Minkara Geologist
DATE/TIME: 8/10/2018

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY: [signature]
DATE/TIME: 8-10-18 1220

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: [signature]
DATE/TIME: 08/10/18 1230

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 4.5 Max:

Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 268108

PM: BM **Due Date: 09/10/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.5 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/10/18 MK

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

Client Notification/ Resolution:

Person Contacted: Date/Time:

Comments/ Resolution:

Field Data Required? Y N

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).

LABORATORY ANALYTICAL DATA

September 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

September 26, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 269475

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 269475

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Asheville Certification IDs

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, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 269475

Lab ID	Sample ID	Matrix	Date Collected	Date Received
269475001	**BRGWC-45**	Water	09/19/18 10:45	09/19/18 16:40
269475002	**BRGWC-47**	Water	09/19/18 09:25	09/19/18 16:40
269475003	**BRGWC-52I**	Water	09/19/18 12:10	09/19/18 16:40
269475004	**FD-1**	Water	09/19/18 00:00	09/19/18 16:40
269475005	**FB-1**	Water	09/19/18 08:50	09/19/18 16:40
269475006	**EB-1**	Water	09/19/18 13:15	09/19/18 16:40

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 269475

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269475001	**BRGWC-45**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	JMW1	1	PASI-A
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
269475002	**BRGWC-47**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	JMW1	1	PASI-A
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
269475003	**BRGWC-52I**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	JMW1	1	PASI-A
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
269475004	**FD-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	JMW1	1	PASI-A
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
269475005	**FB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	JMW1	1	PASI-A
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
269475006	**EB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	JMW1	1	PASI-A
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 269475

Sample: BRGWC-45 **Lab ID: 269475001** Collected: 09/19/18 10:45 Received: 09/19/18 16:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/20/18 10:10	09/21/18 20:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/20/18 10:10	09/21/18 20:39	7440-38-2	
Barium	**0.086**	mg/L	0.010	0.00078	1	09/20/18 10:10	09/21/18 20:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/20/18 10:10	09/21/18 20:39	7440-41-7	
Boron	**0.021J**	mg/L	0.040	0.0039	1	09/20/18 10:10	09/21/18 20:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/20/18 10:10	09/21/18 20:39	7440-43-9	
Calcium	**41.9**	mg/L	25.0	0.69	50	09/20/18 10:10	09/21/18 20:45	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/20/18 10:10	09/21/18 20:39	7440-47-3	
Cobalt	**0.0084J**	mg/L	0.010	0.00052	1	09/20/18 10:10	09/21/18 20:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/20/18 10:10	09/21/18 20:39	7439-92-1	
Lithium	**0.0033J**	mg/L	0.050	0.00097	1	09/20/18 10:10	09/21/18 20:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/20/18 10:10	09/21/18 20:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/20/18 10:10	09/21/18 20:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/20/18 10:10	09/21/18 20:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00010	1	09/25/18 15:00	09/26/18 10:38	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**353**	mg/L	25.0	10.0	1		09/21/18 09:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**58.4**	mg/L	1.2	0.12	5		09/22/18 00:50	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/21/18 22:25	16984-48-8	
Sulfate	**117**	mg/L	5.0	0.085	5		09/22/18 00:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 269475

Sample: BRGWC-47 **Lab ID: 269475002** Collected: 09/19/18 09:25 Received: 09/19/18 16:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/20/18 10:10	09/21/18 20:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/20/18 10:10	09/21/18 20:51	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	09/20/18 10:10	09/21/18 20:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/20/18 10:10	09/21/18 20:51	7440-41-7	
Boron	**0.43**	mg/L	0.040	0.0039	1	09/20/18 10:10	09/21/18 20:51	7440-42-8	
Cadmium	**0.00015J**	mg/L	0.0010	0.000093	1	09/20/18 10:10	09/21/18 20:51	7440-43-9	
Calcium	**321**	mg/L	25.0	0.69	50	09/20/18 10:10	09/21/18 20:56	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/20/18 10:10	09/21/18 20:51	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.010	0.00052	1	09/20/18 10:10	09/21/18 20:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/20/18 10:10	09/21/18 20:51	7439-92-1	
Lithium	**0.043J**	mg/L	0.050	0.00097	1	09/20/18 10:10	09/21/18 20:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/20/18 10:10	09/21/18 20:51	7439-98-7	
Selenium	**0.0020J**	mg/L	0.010	0.0014	1	09/20/18 10:10	09/21/18 20:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/20/18 10:10	09/21/18 20:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00010	1	09/25/18 15:00	09/26/18 10:45	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2160**	mg/L	25.0	10.0	1		09/21/18 09:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.1**	mg/L	0.25	0.024	1		09/21/18 23:07	16887-00-6	
Fluoride	**0.23J**	mg/L	0.30	0.029	1		09/21/18 23:07	16984-48-8	
Sulfate	**1500**	mg/L	50.0	0.85	50		09/22/18 01:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 269475

Sample: BRGWC-52I **Lab ID: 269475003** Collected: 09/19/18 12:10 Received: 09/19/18 16:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/20/18 10:10	09/21/18 21:02	7440-36-0	
Arsenic	**0.0013J**	mg/L	0.0050	0.00057	1	09/20/18 10:10	09/21/18 21:02	7440-38-2	
Barium	**0.030**	mg/L	0.010	0.00078	1	09/20/18 10:10	09/21/18 21:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/20/18 10:10	09/21/18 21:02	7440-41-7	
Boron	**1.7**	mg/L	0.040	0.0039	1	09/20/18 10:10	09/21/18 21:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/20/18 10:10	09/21/18 21:02	7440-43-9	
Calcium	**42.3**	mg/L	25.0	0.69	50	09/20/18 10:10	09/21/18 21:08	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/20/18 10:10	09/21/18 21:02	7440-47-3	
Cobalt	**0.0028J**	mg/L	0.010	0.00052	1	09/20/18 10:10	09/21/18 21:02	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/20/18 10:10	09/21/18 21:02	7439-92-1	
Lithium	**0.0050J**	mg/L	0.050	0.00097	1	09/20/18 10:10	09/21/18 21:02	7439-93-2	
Molybdenum	**0.0061J**	mg/L	0.010	0.0019	1	09/20/18 10:10	09/21/18 21:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/20/18 10:10	09/21/18 21:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/20/18 10:10	09/21/18 21:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00010	1	09/25/18 15:00	09/26/18 10:47	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**364**	mg/L	25.0	10.0	1		09/21/18 09:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.6**	mg/L	0.25	0.024	1		09/21/18 23:27	16887-00-6	
Fluoride	**0.22J**	mg/L	0.30	0.029	1		09/21/18 23:27	16984-48-8	
Sulfate	**178**	mg/L	10.0	0.17	10		09/26/18 10:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 269475

Sample: FD-1 **Lab ID: 269475004** Collected: 09/19/18 00:00 Received: 09/19/18 16:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/20/18 10:10	09/21/18 21:25	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00057	1	09/20/18 10:10	09/21/18 21:25	7440-38-2	
Barium	**0.028**	mg/L	0.010	0.00078	1	09/20/18 10:10	09/21/18 21:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/20/18 10:10	09/21/18 21:25	7440-41-7	
Boron	**1.6**	mg/L	0.040	0.0039	1	09/20/18 10:10	09/21/18 21:25	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/20/18 10:10	09/21/18 21:25	7440-43-9	
Calcium	**40.5**	mg/L	25.0	0.69	50	09/20/18 10:10	09/21/18 21:31	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/20/18 10:10	09/21/18 21:25	7440-47-3	
Cobalt	**0.0028J**	mg/L	0.010	0.00052	1	09/20/18 10:10	09/21/18 21:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/20/18 10:10	09/21/18 21:25	7439-92-1	
Lithium	**0.0048J**	mg/L	0.050	0.00097	1	09/20/18 10:10	09/21/18 21:25	7439-93-2	
Molybdenum	**0.0058J**	mg/L	0.010	0.0019	1	09/20/18 10:10	09/21/18 21:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/20/18 10:10	09/21/18 21:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/20/18 10:10	09/21/18 21:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00010	1	09/25/18 15:00	09/26/18 10:49	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**362**	mg/L	25.0	10.0	1		09/21/18 09:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.4**	mg/L	0.25	0.024	1		09/21/18 23:48	16887-00-6	
Fluoride	**0.15J**	mg/L	0.30	0.029	1		09/21/18 23:48	16984-48-8	
Sulfate	**186**	mg/L	10.0	0.17	10		09/26/18 10:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 269475

Sample: FB-1 **Lab ID: 269475005** Collected: 09/19/18 08:50 Received: 09/19/18 16:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/20/18 10:10	09/21/18 21:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/20/18 10:10	09/21/18 21:42	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	09/20/18 10:10	09/21/18 21:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/20/18 10:10	09/21/18 21:42	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	09/20/18 10:10	09/21/18 21:42	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/20/18 10:10	09/21/18 21:42	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	09/20/18 10:10	09/21/18 21:42	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/20/18 10:10	09/21/18 21:42	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/20/18 10:10	09/21/18 21:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/20/18 10:10	09/21/18 21:42	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/20/18 10:10	09/21/18 21:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/20/18 10:10	09/21/18 21:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/20/18 10:10	09/21/18 21:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/20/18 10:10	09/21/18 21:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00010	1	09/25/18 15:00	09/26/18 10:56	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**16.0J**	mg/L	25.0	10.0	1		09/21/18 09:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.055J**	mg/L	0.25	0.024	1		09/22/18 00:09	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		09/22/18 00:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		09/22/18 00:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 269475

Sample: EB-1 **Lab ID: 269475006** Collected: 09/19/18 13:15 Received: 09/19/18 16:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/20/18 10:10	09/21/18 21:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/20/18 10:10	09/21/18 21:48	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	09/20/18 10:10	09/21/18 21:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/20/18 10:10	09/21/18 21:48	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	09/20/18 10:10	09/21/18 21:48	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/20/18 10:10	09/21/18 21:48	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	09/20/18 10:10	09/21/18 21:48	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/20/18 10:10	09/21/18 21:48	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/20/18 10:10	09/21/18 21:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/20/18 10:10	09/21/18 21:48	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/20/18 10:10	09/21/18 21:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/20/18 10:10	09/21/18 21:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/20/18 10:10	09/21/18 21:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/20/18 10:10	09/21/18 21:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00010	1	09/25/18 15:00	09/26/18 10:59	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**13.0J**	mg/L	25.0	10.0	1		09/21/18 09:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.067J**	mg/L	0.25	0.024	1		09/22/18 00:29	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		09/22/18 00:29	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		09/22/18 00:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 269475

QC Batch: 432510 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

METHOD BLANK: 2383887 Matrix: Water
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	09/26/18 10:33	

LABORATORY CONTROL SAMPLE: 2383888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383889 2383890

Parameter	Units	269475001 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	.0025	.0025	0.0024	0.0024	95	97	75-125	2	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 269475

QC Batch: 13843 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

METHOD BLANK: 61677 Matrix: Water
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/21/18 18:04	
Arsenic	mg/L	ND	0.0050	0.00057	09/21/18 18:04	
Barium	mg/L	ND	0.010	0.00078	09/21/18 18:04	
Beryllium	mg/L	ND	0.0030	0.000050	09/21/18 18:04	
Boron	mg/L	ND	0.040	0.0039	09/21/18 18:04	
Cadmium	mg/L	ND	0.0010	0.000093	09/21/18 18:04	
Calcium	mg/L	ND	0.50	0.014	09/21/18 18:04	
Chromium	mg/L	ND	0.010	0.0016	09/21/18 18:04	
Cobalt	mg/L	ND	0.010	0.00052	09/21/18 18:04	
Lead	mg/L	ND	0.0050	0.00027	09/21/18 18:04	
Lithium	mg/L	ND	0.050	0.00097	09/21/18 18:04	
Molybdenum	mg/L	ND	0.010	0.0019	09/21/18 18:04	
Selenium	mg/L	ND	0.010	0.0014	09/21/18 18:04	
Thallium	mg/L	ND	0.0010	0.00014	09/21/18 18:04	

LABORATORY CONTROL SAMPLE: 61678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.098	98	80-120	
Arsenic	mg/L	.1	0.098	98	80-120	
Barium	mg/L	.1	0.096	96	80-120	
Beryllium	mg/L	.1	0.097	97	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	.1	0.10	101	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lead	mg/L	.1	0.098	98	80-120	
Lithium	mg/L	.1	0.098	98	80-120	
Molybdenum	mg/L	.1	0.096	96	80-120	
Selenium	mg/L	.1	0.099	99	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 61679 61711

Parameter	Units	269420004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.097	0.093	97	93	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 269475

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 61679 61711

Parameter	Units	269420004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	.1	.1	0.096	0.097	95	96	75-125	1	20	
Barium	mg/L	0.0065J	.1	.1	0.10	0.097	97	90	75-125	7	20	
Beryllium	mg/L	ND	.1	.1	0.096	0.099	96	99	75-125	3	20	
Boron	mg/L	ND	1	1	1.0	1.0	100	102	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.095	0.097	95	97	75-125	2	20	
Calcium	mg/L	12.4J	1	1	13.1J	14.1J	66	171	75-125	8	20	M6
Chromium	mg/L	0.0024J	.1	.1	0.10	0.10	99	101	75-125	1	20	
Cobalt	mg/L	ND	.1	.1	0.099	0.10	99	101	75-125	3	20	
Lead	mg/L	ND	.1	.1	0.093	0.095	93	95	75-125	3	20	
Lithium	mg/L	ND	.1	.1	0.098	0.10	98	100	75-125	2	20	
Molybdenum	mg/L	ND	.1	.1	0.097	0.092	97	91	75-125	6	20	
Selenium	mg/L	ND	.1	.1	0.094	0.093	94	92	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.093	0.096	93	96	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 269475

QC Batch: 13908 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

LABORATORY CONTROL SAMPLE: 61880

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	408	102	84-108	

SAMPLE DUPLICATE: 61881

Parameter	Units	269420001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	162	169	4	10	

SAMPLE DUPLICATE: 61882

Parameter	Units	269462002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	46.0	42.0	9	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 269475

QC Batch: 13938 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

METHOD BLANK: 62055 Matrix: Water
Associated Lab Samples: 269475001, 269475002, 269475003, 269475004, 269475005, 269475006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.058J	0.25	0.024	09/21/18 12:46	
Fluoride	mg/L	ND	0.30	0.029	09/21/18 12:46	
Sulfate	mg/L	ND	1.0	0.017	09/21/18 12:46	

LABORATORY CONTROL SAMPLE: 62056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10	100	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 62057 62058

Parameter	Units	269420001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.6	10	10	11.3	11.2	97	96	90-110	1	15	
Fluoride	mg/L	ND	10	10	9.9	10.1	99	101	90-110	3	15	
Sulfate	mg/L	1.3	10	10	11.0	11.8	96	105	90-110	7	15	

MATRIX SPIKE SAMPLE: 62059

Parameter	Units	269420002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1.5	10	11.9	104	90-110	
Fluoride	mg/L	ND	10	10.4	104	90-110	
Sulfate	mg/L	0.36J	10	10.9	105	90-110	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 269475

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.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 269475

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269475001	**BRGWC-45**	EPA 3005A	13843	EPA 6020B	13892
269475002	**BRGWC-47**	EPA 3005A	13843	EPA 6020B	13892
269475003	**BRGWC-52I**	EPA 3005A	13843	EPA 6020B	13892
269475004	**FD-1**	EPA 3005A	13843	EPA 6020B	13892
269475005	**FB-1**	EPA 3005A	13843	EPA 6020B	13892
269475006	**EB-1**	EPA 3005A	13843	EPA 6020B	13892
269475001	**BRGWC-45**	EPA 7470A	432510	EPA 7470A	432653
269475002	**BRGWC-47**	EPA 7470A	432510	EPA 7470A	432653
269475003	**BRGWC-52I**	EPA 7470A	432510	EPA 7470A	432653
269475004	**FD-1**	EPA 7470A	432510	EPA 7470A	432653
269475005	**FB-1**	EPA 7470A	432510	EPA 7470A	432653
269475006	**EB-1**	EPA 7470A	432510	EPA 7470A	432653
269475001	**BRGWC-45**	SM 2540C	13908		
269475002	**BRGWC-47**	SM 2540C	13908		
269475003	**BRGWC-52I**	SM 2540C	13908		
269475004	**FD-1**	SM 2540C	13908		
269475005	**FB-1**	SM 2540C	13908		
269475006	**EB-1**	SM 2540C	13908		
269475001	**BRGWC-45**	EPA 300.0	13938		
269475002	**BRGWC-47**	EPA 300.0	13938		
269475003	**BRGWC-52I**	EPA 300.0	13938		
269475004	**FD-1**	EPA 300.0	13938		
269475005	**FB-1**	EPA 300.0	13938		
269475006	**EB-1**	EPA 300.0	13938		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)
	CONTAINER TYPE:						P	P	P
	PRESERVATION:						3&7	7	3&7
09/19/18	1045	GW		x	BRGWC-45	6	X	X	X
09/19/18	0925	GW		x	BRGWC-47	4	X	X	X
09/19/18	1210	GW		x	BRGWC-52I	4	X	X	X
09/19/18	--	GW		x	FD-1	4	X	X	X
09/19/18	0850	W		x	FB-1	4	X	X	X
09/19/18	1315	W		x	EB-1	4	X	X	X

LAB ID NUMBER

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION: Extra Radium

WO# : 269475

269475

SAMPLED BY AND TITLE: Karim Minkara Geologist
DATE/TIME: 9/19/2018

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME: 9-19-18 1640

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 09/19/18 1640

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.4 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 269475

PM: BM Due Date: 09/26/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.4 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/19/18 MR

Temp should be above freezing to 6°C

Comments:

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

October 17, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 269476

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 269476

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 269476

Lab ID	Sample ID	Matrix	Date Collected	Date Received
269476001	**BRGWC-45**	Water	09/19/18 10:45	09/19/18 16:40
269476002	**BRGWC-47**	Water	09/19/18 09:25	09/19/18 16:40
269476003	**BRGWC-52I**	Water	09/19/18 12:10	09/19/18 16:40
269476004	**FD-1**	Water	09/19/18 00:00	09/19/18 16:40
269476005	**FB-1**	Water	09/19/18 08:50	09/19/18 16:40
269476006	**EB-1**	Water	09/19/18 13:15	09/19/18 16:40

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110 Technology Parkway
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 269476

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269476001	**BRGWC-45**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269476002	**BRGWC-47**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269476003	**BRGWC-52I**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269476004	**FD-1**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269476005	**FB-1**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269476006	**EB-1**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

Sample: BRGWC-45 **Lab ID: 269476001** Collected: 09/19/18 10:45 Received: 09/19/18 16:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.355 ± 0.177 (0.210) C:95% T:NA**	pCi/L	10/01/18 09:24	13982-63-3	
Radium-228	EPA 9320	**0.0136 ± 0.297 (0.690) C:80% T:86%**	pCi/L	10/09/18 12:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.369 ± 0.474 (0.900)**	pCi/L	10/12/18 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

Sample: BRGWC-47 **Lab ID: 269476002** Collected: 09/19/18 09:25 Received: 09/19/18 16:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.618 ± 0.235 (0.236) C:95% T:NA**	pCi/L	10/01/18 09:24	13982-63-3	
Radium-228	EPA 9320	**0.833 ± 0.590 (1.15) C:81% T:79%**	pCi/L	10/09/18 16:38	15262-20-1	
Total Radium	Total Radium Calculation	**1.45 ± 0.825 (1.39)**	pCi/L	10/12/18 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

Sample: BRGWC-52I **Lab ID: 269476003** Collected: 09/19/18 12:10 Received: 09/19/18 16:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.335 ± 0.176 (0.234) C:95% T:NA**	pCi/L	10/01/18 09:24	13982-63-3	
Radium-228	EPA 9320	**1.30 ± 0.683 (1.22) C:80% T:73%**	pCi/L	10/09/18 16:38	15262-20-1	
Total Radium	Total Radium Calculation	**1.64 ± 0.859 (1.45)**	pCi/L	10/12/18 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

Sample: FD-1 **Lab ID: 269476004** Collected: 09/19/18 00:00 Received: 09/19/18 16:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.404 ± 0.199 (0.265) C:92% T:NA**	pCi/L	10/01/18 09:24	13982-63-3	
Radium-228	EPA 9320	**1.26 ± 0.737 (1.37) C:79% T:68%**	pCi/L	10/09/18 16:38	15262-20-1	
Total Radium	Total Radium Calculation	**1.66 ± 0.936 (1.64)**	pCi/L	10/12/18 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

Sample: FB-1 **Lab ID: 269476005** Collected: 09/19/18 08:50 Received: 09/19/18 16:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.235 ± 0.144 (0.197) C:98% T:NA**	pCi/L	10/01/18 09:24	13982-63-3	
Radium-228	EPA 9320	**0.0441 ± 0.381 (0.873) C:78% T:82%**	pCi/L	10/09/18 16:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.279 ± 0.525 (1.07)**	pCi/L	10/12/18 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

Sample: EB-1 **Lab ID: 269476006** Collected: 09/19/18 13:15 Received: 09/19/18 16:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.262 ± 0.170 (0.269) C:88% T:NA**	pCi/L	10/01/18 09:24	13982-63-3	
Radium-228	EPA 9320	**0.403 ± 0.459 (0.965) C:76% T:76%**	pCi/L	10/09/18 16:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.665 ± 0.629 (1.23)**	pCi/L	10/12/18 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 269476

QC Batch: 314442 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 269476001, 269476002, 269476003, 269476004, 269476005, 269476006

METHOD BLANK: 1534836 Matrix: Water
Associated Lab Samples: 269476001, 269476002, 269476003, 269476004, 269476005, 269476006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.188 ± 0.137 (0.225) C:100% T:NA	pCi/L	10/01/18 09:23	

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: Plant Branch
Pace Project No.: 269476

QC Batch: 314657 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 269476001, 269476002, 269476003, 269476004, 269476005, 269476006

METHOD BLANK: 1535684 Matrix: Water
Associated Lab Samples: 269476001, 269476002, 269476003, 269476004, 269476005, 269476006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.758 ± 0.397 (0.700) C:79% T:81%	pCi/L	10/09/18 12:59	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 269476

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 269476

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269476001	**BRGWC-45**	EPA 9315	314442		
269476002	**BRGWC-47**	EPA 9315	314442		
269476003	**BRGWC-52I**	EPA 9315	314442		
269476004	**FD-1**	EPA 9315	314442		
269476005	**FB-1**	EPA 9315	314442		
269476006	**EB-1**	EPA 9315	314442		
269476001	**BRGWC-45**	EPA 9320	314657		
269476002	**BRGWC-47**	EPA 9320	314657		
269476003	**BRGWC-52I**	EPA 9320	314657		
269476004	**FD-1**	EPA 9320	314657		
269476005	**FB-1**	EPA 9320	314657		
269476006	**EB-1**	EPA 9320	314657		
269476001	**BRGWC-45**	Total Radium Calculation	316530		
269476002	**BRGWC-47**	Total Radium Calculation	316530		
269476003	**BRGWC-52I**	Total Radium Calculation	316530		
269476004	**FD-1**	Total Radium Calculation	316530		
269476005	**FB-1**	Total Radium Calculation	316530		
269476006	**EB-1**	Total Radium Calculation	316530		

CHAIN OF CUSTODY RECORD

Pace Analytical®
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com
REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant Branch
PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P		
PRESERVATION:								3&7	7	3&7		
09/19/18	1045	GW		x	BRGWC-45	6		X	X	X		Extra Radium
09/19/18	0925	GW		x	BRGWC-47	4		X	X	X		
09/19/18	1210	GW		x	BRGWC-52I	4		X	X	X		
09/19/18	--	GW		x	FD-1	4		X	X	X		
09/19/18	0850	W		x	FB-1	4		X	X	X		
09/19/18	1315	W		x	EB-1	4		X	X	X		

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

WO# : 269476
269476

SAMPLED BY AND TITLE: Karim Minkara Geologist
DATE/TIME: 9/19/2018
RELINQUISHED BY:
DATE/TIME: 9-19-18 1640

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 09/19/18 1640
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.4 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 269476

PM: BM Due Date: 10/17/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.4 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/19/18 MR

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

LABORATORY ANALYTICAL DATA

October 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 06, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 29, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
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CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610944001	**BRGWC-45**	Water	10/29/18 10:50	10/29/18 17:32
2610944002	**BRGWC-47**	Water	10/29/18 09:35	10/29/18 17:32
2610944003	**BRGWC-52**	Water	10/29/18 14:00	10/29/18 17:32
2610944004	**BRGWC-50**	Water	10/29/18 13:00	10/29/18 17:32
2610944005	**FB-1**	Water	10/29/18 09:10	10/29/18 17:32
2610944006	**EB-1**	Water	10/29/18 15:00	10/29/18 17:32
2610944007	**FD-1**	Water	10/29/18 00:00	10/29/18 17:32

Pace Analytical Services, LLC
110 Technology Parkway
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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610944001	**BRGWC-45**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610944002	**BRGWC-47**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610944003	**BRGWC-52**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
2610944004	**BRGWC-50**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610944005	**FB-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610944006	**EB-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610944007	**FD-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: BRGWC-45 **Lab ID: 2610944001** Collected: 10/29/18 10:50 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 18:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 18:18	7440-38-2	
Barium	**0.098**	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 18:18	7440-39-3	M1
Beryllium	ND	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/02/18 18:18	7440-41-7	
Boron	**0.021J**	mg/L	0.040	0.0039	1	11/01/18 08:53	11/02/18 18:18	7440-42-8	
Cadmium	**0.000098J**	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 18:18	7440-43-9	
Calcium	**40.8**	mg/L	25.0	0.69	50	11/01/18 08:53	11/02/18 18:24	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 18:18	7440-47-3	
Cobalt	**0.0064J**	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 18:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 18:18	7439-92-1	
Lithium	**0.0030J**	mg/L	0.050	0.00097	1	11/01/18 08:53	11/02/18 18:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 18:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 18:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 18:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**329**	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**62.6**	mg/L	1.2	0.12	5		11/02/18 04:01	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		11/01/18 23:06	16984-48-8	
Sulfate	**127**	mg/L	5.0	0.085	5		11/02/18 04:01	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: BRGWC-47 **Lab ID: 2610944002** Collected: 10/29/18 09:35 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 19:10	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 19:10	7440-38-2	
Barium	**0.041**	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 19:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/02/18 19:10	7440-41-7	
Boron	**0.40**	mg/L	0.040	0.0039	1	11/01/18 08:53	11/02/18 19:10	7440-42-8	
Cadmium	**0.00019J**	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 19:10	7440-43-9	
Calcium	**326**	mg/L	25.0	0.69	50	11/01/18 08:53	11/02/18 19:16	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 19:10	7440-47-3	
Cobalt	**0.0014J**	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 19:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 19:10	7439-92-1	
Lithium	**0.039J**	mg/L	0.050	0.00097	1	11/01/18 08:53	11/02/18 19:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 19:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 19:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 19:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2130**	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.3**	mg/L	0.25	0.024	1		11/02/18 00:14	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/02/18 00:14	16984-48-8	
Sulfate	**1720**	mg/L	50.0	0.85	50		11/02/18 04:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: BRGWC-52 **Lab ID: 2610944003** Collected: 10/29/18 14:00 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 19:21	7440-36-0	
Arsenic	**0.0038J**	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 19:21	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 19:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/02/18 19:21	7440-41-7	
Boron	**1.3**	mg/L	0.040	0.0039	1	11/01/18 08:53	11/02/18 19:21	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 19:21	7440-43-9	
Calcium	**39.8**	mg/L	25.0	0.69	50	11/01/18 08:53	11/02/18 19:27	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 19:21	7440-47-3	
Cobalt	**0.0015J**	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 19:21	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 19:21	7439-92-1	
Lithium	**0.0048J**	mg/L	0.050	0.00097	1	11/01/18 08:53	11/02/18 19:21	7439-93-2	
Molybdenum	**0.0065J**	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 19:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 19:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 19:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:38	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**334**	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.8**	mg/L	0.25	0.024	1		11/02/18 00:37	16887-00-6	
Fluoride	**0.14J**	mg/L	0.30	0.029	1		11/02/18 00:37	16984-48-8	
Sulfate	**157**	mg/L	50.0	0.85	50		11/06/18 00:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: BRGWC-50 **Lab ID: 2610944004** Collected: 10/29/18 13:00 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 19:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 19:33	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 19:33	7440-39-3	
Beryllium	**0.0042**	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/06/18 14:50	7440-41-7	
Boron	**0.30**	mg/L	0.040	0.0039	1	11/01/18 08:53	11/06/18 14:50	7440-42-8	
Cadmium	**0.083**	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 19:33	7440-43-9	
Calcium	**236**	mg/L	25.0	0.69	50	11/01/18 08:53	11/02/18 19:38	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 19:33	7440-47-3	
Cobalt	**1.4**	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 19:33	7440-48-4	
Lead	**0.00030J**	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 19:33	7439-92-1	
Lithium	**0.041J**	mg/L	0.050	0.00097	1	11/01/18 08:53	11/06/18 14:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 19:33	7439-98-7	
Selenium	**0.0020J**	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 19:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 19:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2300**	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.9**	mg/L	0.25	0.024	1		11/02/18 00:59	16887-00-6	
Fluoride	**0.24J**	mg/L	0.30	0.029	1		11/02/18 00:59	16984-48-8	
Sulfate	**1750**	mg/L	50.0	0.85	50		11/02/18 04:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: FB-1 **Lab ID: 2610944005** Collected: 10/29/18 09:10 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 19:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 19:44	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 19:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/02/18 19:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	11/01/18 08:53	11/02/18 19:44	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 19:44	7440-43-9	
Calcium	**0.018J**	mg/L	0.50	0.014	1	11/01/18 08:53	11/02/18 19:44	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 19:44	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 19:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 19:44	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/01/18 08:53	11/02/18 19:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 19:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 19:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 19:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:47	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		11/02/18 01:22	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/02/18 01:22	16984-48-8	
Sulfate	**0.098J**	mg/L	1.0	0.017	1		11/02/18 01:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: EB-1 **Lab ID: 2610944006** Collected: 10/29/18 15:00 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 19:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 19:50	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 19:50	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/02/18 19:50	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	11/01/18 08:53	11/02/18 19:50	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 19:50	7440-43-9	
Calcium	**0.017J**	mg/L	0.50	0.014	1	11/01/18 08:53	11/02/18 19:50	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 19:50	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 19:50	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 19:50	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/01/18 08:53	11/02/18 19:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 19:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 19:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 19:50	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		11/02/18 01:45	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/02/18 01:45	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		11/02/18 01:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Sample: FD-1 **Lab ID: 2610944007** Collected: 10/29/18 00:00 Received: 10/29/18 17:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/01/18 08:53	11/02/18 19:56	7440-36-0	
Arsenic	**0.0029J**	mg/L	0.0050	0.00057	1	11/01/18 08:53	11/02/18 19:56	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00078	1	11/01/18 08:53	11/02/18 19:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/01/18 08:53	11/02/18 19:56	7440-41-7	
Boron	**1.3**	mg/L	0.040	0.0039	1	11/01/18 08:53	11/02/18 19:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/01/18 08:53	11/02/18 19:56	7440-43-9	
Calcium	**40.3**	mg/L	25.0	0.69	50	11/01/18 08:53	11/02/18 20:01	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/01/18 08:53	11/02/18 19:56	7440-47-3	
Cobalt	**0.0015J**	mg/L	0.010	0.00052	1	11/01/18 08:53	11/02/18 19:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/01/18 08:53	11/02/18 19:56	7439-92-1	
Lithium	**0.0047J**	mg/L	0.050	0.00097	1	11/01/18 08:53	11/02/18 19:56	7439-93-2	
Molybdenum	**0.0063J**	mg/L	0.010	0.0019	1	11/01/18 08:53	11/02/18 19:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/01/18 08:53	11/02/18 19:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/01/18 08:53	11/02/18 19:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/01/18 09:16	11/01/18 14:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**330**	mg/L	25.0	10.0	1		11/01/18 18:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.7**	mg/L	0.25	0.024	1		11/02/18 02:07	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		11/02/18 02:07	16984-48-8	
Sulfate	**183**	mg/L	50.0	0.85	50		11/02/18 05:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

QC Batch: 16397 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

METHOD BLANK: 73390 Matrix: Water
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	11/01/18 14:21	

LABORATORY CONTROL SAMPLE: 73391

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73392 73393

Parameter	Units	2610944001 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	.0025	.0025	0.0023	0.0023	94	94	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

QC Batch: 16395 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

METHOD BLANK: 73386 Matrix: Water
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/02/18 18:07	
Arsenic	mg/L	ND	0.0050	0.00057	11/02/18 18:07	
Barium	mg/L	ND	0.010	0.00078	11/02/18 18:07	
Beryllium	mg/L	ND	0.0030	0.000050	11/02/18 18:07	
Boron	mg/L	ND	0.040	0.0039	11/02/18 18:07	
Cadmium	mg/L	ND	0.0010	0.000093	11/02/18 18:07	
Calcium	mg/L	0.015J	0.50	0.014	11/02/18 18:07	
Chromium	mg/L	ND	0.010	0.0016	11/02/18 18:07	
Cobalt	mg/L	ND	0.010	0.00052	11/02/18 18:07	
Lead	mg/L	ND	0.0050	0.00027	11/02/18 18:07	
Lithium	mg/L	ND	0.050	0.00097	11/02/18 18:07	
Molybdenum	mg/L	ND	0.010	0.0019	11/02/18 18:07	
Selenium	mg/L	ND	0.010	0.0014	11/02/18 18:07	
Thallium	mg/L	ND	0.0010	0.00014	11/02/18 18:07	

LABORATORY CONTROL SAMPLE: 73387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	106	80-120	
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.10	103	80-120	
Beryllium	mg/L	.1	0.098	98	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	.1	0.10	104	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	.1	0.10	103	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lead	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.099	99	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.10	103	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73388 73389

Parameter	Units	2610944001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	112	109	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73388 73389

Parameter	Units	2610944001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20	
Barium	mg/L	0.098	.1	.1	0.23	0.22	129	126	75-125	1	20	M1
Beryllium	mg/L	ND	.1	.1	0.094	0.094	94	94	75-125	0	20	
Boron	mg/L	0.021J	1	1	0.94	0.94	92	92	75-125	0	20	
Cadmium	mg/L	0.000098J	.1	.1	0.11	0.10	106	102	75-125	4	20	
Calcium	mg/L	40.8	1	1	46.2	45.3	533	445	75-125	2	20	M6
Chromium	mg/L	ND	.1	.1	0.11	0.11	107	107	75-125	0	20	
Cobalt	mg/L	0.0064J	.1	.1	0.11	0.11	107	105	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20	
Lithium	mg/L	0.0030J	.1	.1	0.093	0.093	90	90	75-125	0	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	108	107	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	102	100	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

QC Batch: 16469 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

LABORATORY CONTROL SAMPLE: 73760

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

SAMPLE DUPLICATE: 73761

Parameter	Units	2611010001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	52.0	41.0	24	10	D6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

QC Batch: 16403 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

METHOD BLANK: 73413 Matrix: Water
Associated Lab Samples: 2610944001, 2610944002, 2610944003, 2610944004, 2610944005, 2610944006, 2610944007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	11/01/18 22:21	
Fluoride	mg/L	ND	0.30	0.029	11/01/18 22:21	
Sulfate	mg/L	ND	1.0	0.017	11/01/18 22:21	

LABORATORY CONTROL SAMPLE: 73414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.6	106	90-110	
Fluoride	mg/L	10	9.8	98	90-110	
Sulfate	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73415 73416

Parameter	Units	2610944001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	62.6	10	10	63.3	63.6	7	10	90-110	1	15	E,M1
Fluoride	mg/L	ND	10	10	10.5	10.5	105	105	90-110	1	15	
Sulfate	mg/L	127	10	10	104	104	-226	-225	90-110	0	15	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

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.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2610944

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610944001	**BRGWC-45**	EPA 3005A	16395	EPA 6020B	16437
2610944002	**BRGWC-47**	EPA 3005A	16395	EPA 6020B	16437
2610944003	**BRGWC-52**	EPA 3005A	16395	EPA 6020B	16437
2610944004	**BRGWC-50**	EPA 3005A	16395	EPA 6020B	16437
2610944005	**FB-1**	EPA 3005A	16395	EPA 6020B	16437
2610944006	**EB-1**	EPA 3005A	16395	EPA 6020B	16437
2610944007	**FD-1**	EPA 3005A	16395	EPA 6020B	16437
2610944001	**BRGWC-45**	EPA 7470A	16397	EPA 7470A	16440
2610944002	**BRGWC-47**	EPA 7470A	16397	EPA 7470A	16440
2610944003	**BRGWC-52**	EPA 7470A	16397	EPA 7470A	16440
2610944004	**BRGWC-50**	EPA 7470A	16397	EPA 7470A	16440
2610944005	**FB-1**	EPA 7470A	16397	EPA 7470A	16440
2610944006	**EB-1**	EPA 7470A	16397	EPA 7470A	16440
2610944007	**FD-1**	EPA 7470A	16397	EPA 7470A	16440
2610944001	**BRGWC-45**	SM 2540C	16469		
2610944002	**BRGWC-47**	SM 2540C	16469		
2610944003	**BRGWC-52**	SM 2540C	16469		
2610944004	**BRGWC-50**	SM 2540C	16469		
2610944005	**FB-1**	SM 2540C	16469		
2610944006	**EB-1**	SM 2540C	16469		
2610944007	**FD-1**	SM 2540C	16469		
2610944001	**BRGWC-45**	EPA 300.0	16403		
2610944002	**BRGWC-47**	EPA 300.0	16403		
2610944003	**BRGWC-52**	EPA 300.0	16403		
2610944004	**BRGWC-50**	EPA 300.0	16403		
2610944005	**FB-1**	EPA 300.0	16403		
2610944006	**EB-1**	EPA 300.0	16403		
2610944007	**FD-1**	EPA 300.0	16403		

CHAIN OF CUSTODY RECORD

Pace Analytical®
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch Pond BCD

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
	CONTAINER TYPE						P	P	P	
	PRESERVATION						3&7	7	3&7	
10/29/18	1050	GW		x	BRGWC-45		X	X	X	1
10/29/18	0935	GW		x	BRGWC-47		X	X	X	2
10/29/18	1400	GW		x	BRGWC-52		X	X	X	3
10/29/18	1300	GW		x	~~PZ-50~~ BRGWC-50		X	X	X	4
10/29/18	0910	W		x	FB-1		X	X	X	5
10/29/18	1500	W		x	EB-1		X	X	X	6
10/29/18	—	GW		X	FD-1		X	X	X	7

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER
S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION
1 Extra Radium

SAMPLED BY AND TITLE:
DATE/TIME: 10/29/2018
RELINQUISHED BY:
DATE/TIME: 10-29-18 / 1732

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 10/29/18 1732
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.5°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

WO# : 2610944
2610944

Plant Branch COC (App III and IV)

Sample Condition Upon Receipt

Pace Analytical

Client Name: Georgia Power

WO#: 2610944

PM: BM Due Date: 11/06/18

CLIENT: GAPower-CCR

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 082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.5°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/29/18 CM

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 29, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 29, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Pennsylvania Certification IDs

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
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610945001	**BRGWC-45**	Water	10/29/18 10:50	10/29/18 17:32
2610945002	**BRGWC-47**	Water	10/29/18 09:35	10/29/18 17:32
2610945003	**BRGWC-52**	Water	10/29/18 14:00	10/29/18 17:32
2610945004	**BRGWC-50**	Water	10/29/18 13:00	10/29/18 17:32
2610945005	**FB-1**	Water	10/29/18 09:10	10/29/18 17:32
2610945006	**EB-1**	Water	10/29/18 15:00	10/29/18 17:32
2610945007	**FD-1**	Water	10/29/18 00:00	10/29/18 17:32

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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610945001	**BRGWC-45**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610945002	**BRGWC-47**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610945003	**BRGWC-52**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610945004	**BRGWC-50**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610945005	**FB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610945006	**EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610945007	**FD-1**	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 Pond BCD
Pace Project No.: 2610945

Sample: BRGWC-45 **Lab ID: 2610945001** Collected: 10/29/18 10:50 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.237 ± 0.172 (0.283) C:94% T:NA**	pCi/L	11/15/18 08:42	13982-63-3	
Radium-228	EPA 9320	**0.164 ± 0.458 (0.986) C:52% T:91%**	pCi/L	11/13/18 16:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.401 ± 0.630 (1.27)**	pCi/L	11/27/18 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Sample: BRGWC-47 **Lab ID: 2610945002** Collected: 10/29/18 09:35 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.666 ± 0.280 (0.293) C:90% T:NA**	pCi/L	11/15/18 08:42	13982-63-3	
Radium-228	EPA 9320	**0.427 ± 0.446 (0.901) C:56% T:89%**	pCi/L	11/13/18 16:05	15262-20-1	
Total Radium	Total Radium Calculation	**1.09 ± 0.726 (1.19)**	pCi/L	11/27/18 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Sample: BRGWC-52 **Lab ID: 2610945003** Collected: 10/29/18 14:00 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.735 ± 0.304 (0.366) C:87% T:NA**	pCi/L	11/15/18 08:43	13982-63-3	
Radium-228	EPA 9320	**0.628 ± 0.598 (1.19) C:54% T:67%**	pCi/L	11/13/18 16:06	15262-20-1	
Total Radium	Total Radium Calculation	**1.36 ± 0.902 (1.56)**	pCi/L	11/27/18 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Sample: BRGWC-50 **Lab ID: 2610945004** Collected: 10/29/18 13:00 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.514 ± 0.219 (0.236) C:104% T:NA**	pCi/L	11/15/18 08:43	13982-63-3	
Radium-228	EPA 9320	**0.478 ± 0.476 (0.956) C:56% T:83%**	pCi/L	11/13/18 16:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.992 ± 0.695 (1.19)**	pCi/L	11/27/18 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Sample: FB-1 **Lab ID: 2610945005** Collected: 10/29/18 09:10 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.146 ± 0.163 (0.331) C:98% T:NA**	pCi/L	11/15/18 08:42	13982-63-3	
Radium-228	EPA 9320	**-0.533 ± 0.389 (0.934) C:56% T:87%**	pCi/L	11/13/18 16:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.146 ± 0.552 (1.27)**	pCi/L	11/27/18 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Sample: EB-1 **Lab ID: 2610945006** Collected: 10/29/18 15:00 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.305 ± 0.198 (0.309) C:90% T:NA**	pCi/L	11/15/18 08:43	13982-63-3	
Radium-228	EPA 9320	**-0.0630 ± 0.401 (0.900) C:62% T:80%**	pCi/L	11/13/18 16:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.305 ± 0.599 (1.21)**	pCi/L	11/27/18 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Sample: FD-1 **Lab ID: 2610945007** Collected: 10/29/18 00:00 Received: 10/29/18 17:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.489 ± 0.244 (0.281) C:78% T:NA**	pCi/L	11/15/18 08:42	13982-63-3	
Radium-228	EPA 9320	**1.16 ± 0.756 (1.40) C:55% T:49%**	pCi/L	11/13/18 16:06	15262-20-1	
Total Radium	Total Radium Calculation	**1.65 ± 1.000 (1.68)**	pCi/L	11/21/18 14:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

QC Batch: 319788 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610945001, 2610945002, 2610945003, 2610945004, 2610945005, 2610945006, 2610945007

METHOD BLANK: 1559277 Matrix: Water
Associated Lab Samples: 2610945001, 2610945002, 2610945003, 2610945004, 2610945005, 2610945006, 2610945007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.207 ± 0.146 (0.213) C:100% T:NA	pCi/L	11/15/18 08:41	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

QC Batch: 319281 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2610945001, 2610945002, 2610945003, 2610945004, 2610945005, 2610945006, 2610945007

METHOD BLANK: 1557166 Matrix: Water
Associated Lab Samples: 2610945001, 2610945002, 2610945003, 2610945004, 2610945005, 2610945006, 2610945007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.146 ± 0.262 (0.574) C:88% T:80%	pCi/L	11/13/18 12:58	

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

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2610945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610945001	**BRGWC-45**	EPA 9315	319788		
2610945002	**BRGWC-47**	EPA 9315	319788		
2610945003	**BRGWC-52**	EPA 9315	319788		
2610945004	**BRGWC-50**	EPA 9315	319788		
2610945005	**FB-1**	EPA 9315	319788		
2610945006	**EB-1**	EPA 9315	319788		
2610945007	**FD-1**	EPA 9315	319788		
2610945001	**BRGWC-45**	EPA 9320	319281		
2610945002	**BRGWC-47**	EPA 9320	319281		
2610945003	**BRGWC-52**	EPA 9320	319281		
2610945004	**BRGWC-50**	EPA 9320	319281		
2610945005	**FB-1**	EPA 9320	319281		
2610945006	**EB-1**	EPA 9320	319281		
2610945007	**FD-1**	EPA 9320	319281		
2610945001	**BRGWC-45**	Total Radium Calculation	321829		
2610945002	**BRGWC-47**	Total Radium Calculation	321829		
2610945003	**BRGWC-52**	Total Radium Calculation	321829		
2610945004	**BRGWC-50**	Total Radium Calculation	321829		
2610945005	**FB-1**	Total Radium Calculation	321829		
2610945006	**EB-1**	Total Radium Calculation	321829		
2610945007	**FD-1**	Total Radium Calculation	321532		

CHAIN OF CUSTODY RECORD

Pace Analytical
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch Pond 8CD

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		P 3&7 Metals App. III & IV (EPA 6020/7470)	P 7 Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	P 3&7 Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
10/29/18	1050	GW		x	BRGWC-45			X	X	X							1
10/29/18	0935	GW		x	BRGWC-47			X	X	X							2
10/29/18	1400	GW		x	BRGWC-52			X	X	X							3
10/29/18	1300	GW		x	~~PZ-50~~ BRGWC-50			X	X	X							4
10/29/18	0910	W		x	FB-1			X	X	X							5
10/29/18	1500	W		x	EB-1			X	X	X							6
10/29/18	—	GW		X	FD-1			X	X	X							7

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

1 Extra Radium

SAMPLED BY AND TITLE:
DATE/TIME: 10/29/2018
RELINQUISHED BY:
DATE/TIME: 10-29-18 1732

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 10/29/18 1732
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTH

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.5°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

WO# : 2610945
2610945

Sample Condition Upon Receipt

Pace Analytical

Client Name: Georgia Power

WO# : 2610945

PM: BM Due Date: 11/29/18

CLIENT: GAPower-CCR

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 082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.5°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/29/18 CM

Temp should be above freezing to 6°C

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

LABORATORY ANALYTICAL DATA

November 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 06, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2612012

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2612012

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2612012

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2612012001	**BRGWC-45**	Water	11/28/18 16:05	11/29/18 09:00
2612012002	**BRGWC-47**	Water	11/28/18 11:05	11/29/18 09:00
2612012003	**BRGWC-50**	Water	11/28/18 12:15	11/29/18 09:00
2612012004	**BRGWC-52**	Water	11/28/18 14:35	11/29/18 09:00
2612012005	**FB-1**	Water	11/28/18 11:30	11/29/18 09:00
2612012006	**EB-1**	Water	11/28/18 16:45	11/29/18 09:00
2612012007	**FD-1**	Water	11/28/18 00:00	11/29/18 09:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2612012

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2612012001	**BRGWC-45**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612012002	**BRGWC-47**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612012003	**BRGWC-50**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612012004	**BRGWC-52**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612012005	**FB-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612012006	**EB-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612012007	**FD-1**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: BRGWC-45 **Lab ID: 2612012001** Collected: 11/28/18 16:05 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 15:25	7440-36-0	
Arsenic	**0.00096J**	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 15:25	7440-38-2	
Barium	**0.11**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 15:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 15:25	7440-41-7	
Boron	**0.026J**	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 15:25	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 15:25	7440-43-9	
Calcium	**45.1**	mg/L	25.0	0.69	50	11/29/18 12:11	11/30/18 15:31	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 15:25	7440-47-3	
Cobalt	**0.0071J**	mg/L	0.010	0.00052	1	11/29/18 12:11	11/30/18 15:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 15:25	7439-92-1	
Lithium	**0.0035J**	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 15:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 15:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 15:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 15:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 13:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**358**	mg/L	25.0	10.0	1		11/29/18 13:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**58.1**	mg/L	2.5	0.24	10		12/04/18 03:34	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		12/03/18 22:40	16984-48-8	
Sulfate	**133**	mg/L	10.0	0.17	10		12/04/18 03:34	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: BRGWC-47 **Lab ID: 2612012002** Collected: 11/28/18 11:05 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 15:36	7440-36-0	
Arsenic	**0.0019J**	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 15:36	7440-38-2	
Barium	**0.039**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 15:36	7440-39-3	
Beryllium	**0.000056J**	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 15:36	7440-41-7	
Boron	**0.51**	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 15:36	7440-42-8	
Cadmium	**0.00022J**	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 15:36	7440-43-9	
Calcium	**354**	mg/L	25.0	0.69	50	11/29/18 12:11	11/30/18 15:42	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 15:36	7440-47-3	
Cobalt	**0.0016J**	mg/L	0.010	0.00052	1	11/29/18 12:11	11/30/18 15:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 15:36	7439-92-1	
Lithium	**0.044J**	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 15:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 15:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 15:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 15:36	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 14:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2320**	mg/L	25.0	10.0	1		11/29/18 13:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.1**	mg/L	0.25	0.024	1		12/03/18 23:48	16887-00-6	
Fluoride	**0.063J**	mg/L	0.30	0.029	1		12/03/18 23:48	16984-48-8	
Sulfate	**1730**	mg/L	50.0	0.85	50		12/04/18 03:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: BRGWC-50 **Lab ID: 2612012003** Collected: 11/28/18 12:15 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 15:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 15:59	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 15:59	7440-39-3	
Beryllium	**0.0029J**	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 15:59	7440-41-7	
Boron	**0.35**	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 15:59	7440-42-8	
Cadmium	**0.031**	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 15:59	7440-43-9	
Calcium	**254**	mg/L	25.0	0.69	50	11/29/18 12:11	11/30/18 16:05	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 15:59	7440-47-3	
Cobalt	**1.4**	mg/L	0.50	0.026	50	11/29/18 12:11	11/30/18 16:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 15:59	7439-92-1	
Lithium	**0.041J**	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 15:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 15:59	7439-98-7	
Selenium	**0.0017J**	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 15:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 15:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 14:11	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2300**	mg/L	25.0	10.0	1		11/29/18 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.0**	mg/L	0.25	0.024	1		12/04/18 00:11	16887-00-6	
Fluoride	**0.41**	mg/L	0.30	0.029	1		12/04/18 00:11	16984-48-8	
Sulfate	**1780**	mg/L	50.0	0.85	50		12/04/18 04:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: BRGWC-52 **Lab ID: 2612012004** Collected: 11/28/18 14:35 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 16:16	7440-36-0	
Arsenic	**0.0016J**	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 16:16	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 16:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 16:16	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 16:16	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 16:16	7440-43-9	
Calcium	**38.2**	mg/L	25.0	0.69	50	11/29/18 12:11	11/30/18 16:22	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 16:16	7440-47-3	
Cobalt	**0.0012J**	mg/L	0.010	0.00052	1	11/29/18 12:11	11/30/18 16:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 16:16	7439-92-1	
Lithium	**0.0052J**	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 16:16	7439-93-2	
Molybdenum	**0.0027J**	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 16:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 16:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 16:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 14:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**357**	mg/L	25.0	10.0	1		11/29/18 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.2**	mg/L	0.25	0.024	1		12/04/18 00:33	16887-00-6	
Fluoride	**0.24J**	mg/L	0.30	0.029	1		12/04/18 00:33	16984-48-8	
Sulfate	**189**	mg/L	10.0	0.17	10		12/06/18 11:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: FB-1 **Lab ID: 2612012005** Collected: 11/28/18 11:30 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00079J**	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 17:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 17:08	7440-38-2	
Barium	**0.00090J**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 17:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 17:08	7440-41-7	
Boron	**0.0075J**	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 17:08	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 17:08	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	11/29/18 12:11	11/30/18 17:08	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 17:08	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/29/18 12:11	11/30/18 17:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 17:08	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 17:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 17:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 17:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 17:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 14:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**11.0J**	mg/L	25.0	10.0	1		11/29/18 13:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.075J**	mg/L	0.25	0.024	1		12/04/18 00:56	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		12/04/18 00:56	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		12/04/18 00:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: EB-1 **Lab ID: 2612012006** Collected: 11/28/18 16:45 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 17:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 17:14	7440-38-2	
Barium	**0.00088J**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 17:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 17:14	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 17:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 17:14	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	11/29/18 12:11	11/30/18 17:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 17:14	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/29/18 12:11	11/30/18 17:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 17:14	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 17:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 17:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 17:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 17:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 15:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		11/29/18 13:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.098J**	mg/L	0.25	0.024	1		12/04/18 01:19	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		12/04/18 01:19	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		12/04/18 01:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2612012

Sample: FD-1 **Lab ID: 2612012007** Collected: 11/28/18 00:00 Received: 11/29/18 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/29/18 12:11	11/30/18 17:19	7440-36-0	
Arsenic	**0.0013J**	mg/L	0.0050	0.00057	1	11/29/18 12:11	11/30/18 17:19	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	11/29/18 12:11	11/30/18 17:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/29/18 12:11	11/30/18 17:19	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	11/29/18 12:11	11/30/18 17:19	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/29/18 12:11	11/30/18 17:19	7440-43-9	
Calcium	**38.7**	mg/L	25.0	0.69	50	11/29/18 12:11	11/30/18 17:30	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/29/18 12:11	11/30/18 17:19	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.010	0.00052	1	11/29/18 12:11	11/30/18 17:19	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/29/18 12:11	11/30/18 17:19	7439-92-1	
Lithium	**0.0053J**	mg/L	0.050	0.00097	1	11/29/18 12:11	11/30/18 17:19	7439-93-2	
Molybdenum	**0.0027J**	mg/L	0.010	0.0019	1	11/29/18 12:11	11/30/18 17:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/29/18 12:11	11/30/18 17:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/29/18 12:11	11/30/18 17:19	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/03/18 09:23	12/03/18 15:42	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**336**	mg/L	25.0	10.0	1		11/29/18 13:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.2**	mg/L	0.25	0.024	1		12/04/18 01:41	16887-00-6	
Fluoride	**0.45**	mg/L	0.30	0.029	1		12/04/18 01:41	16984-48-8	
Sulfate	**190**	mg/L	10.0	0.17	10		12/04/18 05:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2612012

QC Batch: 18062 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

METHOD BLANK: 81216 Matrix: Water
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	12/03/18 13:17	

LABORATORY CONTROL SAMPLE: 81217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0022	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 81220 81221

Parameter	Units	2612012001 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	.0025	.0025	0.0023	0.0023	93	93	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2612012

QC Batch: 17933 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

METHOD BLANK: 80654 Matrix: Water
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/30/18 14:50	
Arsenic	mg/L	ND	0.0050	0.00057	11/30/18 14:50	
Barium	mg/L	ND	0.010	0.00078	11/30/18 14:50	
Beryllium	mg/L	ND	0.0030	0.000050	11/30/18 14:50	
Boron	mg/L	ND	0.040	0.0039	11/30/18 14:50	
Cadmium	mg/L	ND	0.0010	0.000093	11/30/18 14:50	
Calcium	mg/L	ND	0.50	0.014	11/30/18 14:50	
Chromium	mg/L	ND	0.010	0.0016	11/30/18 14:50	
Cobalt	mg/L	ND	0.010	0.00052	11/30/18 14:50	
Lead	mg/L	ND	0.0050	0.00027	11/30/18 14:50	
Lithium	mg/L	ND	0.050	0.00097	11/30/18 14:50	
Molybdenum	mg/L	ND	0.010	0.0019	11/30/18 14:50	
Selenium	mg/L	ND	0.010	0.0014	11/30/18 14:50	
Thallium	mg/L	ND	0.0010	0.00014	11/30/18 14:50	

LABORATORY CONTROL SAMPLE: 80655

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	101	80-120	
Arsenic	mg/L	.1	0.099	99	80-120	
Barium	mg/L	.1	0.099	99	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.11	106	80-120	
Molybdenum	mg/L	.1	0.10	105	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 80656 80657

Parameter	Units	2612012004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2612012

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 80656 80657

Parameter	Units	2612012004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0016J	.1	.1	0.10	0.10	100	100	75-125	0	20	
Barium	mg/L	0.017	.1	.1	0.12	0.12	100	100	75-125	0	20	
Beryllium	mg/L	ND	.1	.1	0.091	0.091	91	91	75-125	0	20	
Boron	mg/L	1.5	1	1	2.4	2.6	91	107	75-125	6	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20	
Calcium	mg/L	38.2	1	1	40.2	41.7	201	353	75-125	4	20	M6
Chromium	mg/L	ND	.1	.1	0.10	0.10	102	102	75-125	0	20	
Cobalt	mg/L	0.0012J	.1	.1	0.10	0.10	99	102	75-125	3	20	
Lead	mg/L	ND	.1	.1	0.099	0.10	99	101	75-125	2	20	
Lithium	mg/L	0.0052J	.1	.1	0.10	0.10	95	98	75-125	2	20	
Molybdenum	mg/L	0.0027J	.1	.1	0.11	0.11	104	107	75-125	3	20	
Selenium	mg/L	ND	.1	.1	0.097	0.097	97	97	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2612012

QC Batch: 17944 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

LABORATORY CONTROL SAMPLE: 80712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	413	103	84-108	

SAMPLE DUPLICATE: 80713

Parameter	Units	2611908001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1040	1030	1	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2612012

QC Batch: 18109 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

METHOD BLANK: 81424 Matrix: Water
Associated Lab Samples: 2612012001, 2612012002, 2612012003, 2612012004, 2612012005, 2612012006, 2612012007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.067J	0.25	0.024	12/03/18 21:55	
Fluoride	mg/L	ND	0.30	0.029	12/03/18 21:55	
Sulfate	mg/L	ND	1.0	0.017	12/03/18 21:55	

LABORATORY CONTROL SAMPLE: 81425

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.5	105	90-110	
Fluoride	mg/L	10	9.6	96	90-110	
Sulfate	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 81426 81427

Parameter	Units	2612012001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	58.1	10	10	60.1	60.1	20	20	90-110	0	15	E,M1
Fluoride	mg/L	ND	10	10	9.7	9.7	97	97	90-110	0	15	
Sulfate	mg/L	133	10	10	103	103	-300	-300	90-110	0	15	E,M1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 2612012

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.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2612012

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2612012001	**BRGWC-45**	EPA 3005A	17933	EPA 6020B	17956
2612012002	**BRGWC-47**	EPA 3005A	17933	EPA 6020B	17956
2612012003	**BRGWC-50**	EPA 3005A	17933	EPA 6020B	17956
2612012004	**BRGWC-52**	EPA 3005A	17933	EPA 6020B	17956
2612012005	**FB-1**	EPA 3005A	17933	EPA 6020B	17956
2612012006	**EB-1**	EPA 3005A	17933	EPA 6020B	17956
2612012007	**FD-1**	EPA 3005A	17933	EPA 6020B	17956
2612012001	**BRGWC-45**	EPA 7470A	18062	EPA 7470A	18094
2612012002	**BRGWC-47**	EPA 7470A	18062	EPA 7470A	18094
2612012003	**BRGWC-50**	EPA 7470A	18062	EPA 7470A	18094
2612012004	**BRGWC-52**	EPA 7470A	18062	EPA 7470A	18094
2612012005	**FB-1**	EPA 7470A	18062	EPA 7470A	18094
2612012006	**EB-1**	EPA 7470A	18062	EPA 7470A	18094
2612012007	**FD-1**	EPA 7470A	18062	EPA 7470A	18094
2612012001	**BRGWC-45**	SM 2540C	17944		
2612012002	**BRGWC-47**	SM 2540C	17944		
2612012003	**BRGWC-50**	SM 2540C	17944		
2612012004	**BRGWC-52**	SM 2540C	17944		
2612012005	**FB-1**	SM 2540C	17944		
2612012006	**EB-1**	SM 2540C	17944		
2612012007	**FD-1**	SM 2540C	17944		
2612012001	**BRGWC-45**	EPA 300.0	18109		
2612012002	**BRGWC-47**	EPA 300.0	18109		
2612012003	**BRGWC-50**	EPA 300.0	18109		
2612012004	**BRGWC-52**	EPA 300.0	18109		
2612012005	**FB-1**	EPA 300.0	18109		
2612012006	**EB-1**	EPA 300.0	18109		
2612012007	**FD-1**	EPA 300.0	18109		

WO# : 2612012

2612012

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE								P	P	P							
PRESERVATION								3&7	7	3&7							
11/28/18	1605	GW		x	BRGWC-45	4		X	X	X							
11/28/18	1105	GW		x	BRGWC-47	4		X	X	X							
11/28/18	1215	GW		x	BRGWC-50	6		X	X	X							Extra Radium
11/28/18	1435	GW		x	BRGWC-52	4		X	X	X							
11/28/18	1130	W		x	FB-1	4		X	X	X							
11/28/18	1645	W		x	FB-1	4		X	X	X							
11/28/18	–	GW		X	FD-1	4		X	X	X							

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: Karen Mercer	DATE/TIME: 11-29-18 / 900	RELINQUISHED BY: Karen Mercer	DATE/TIME: 11-29-18 / 0900
RECEIVED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:
RECEIVED BY LAB: Laburman	DATE/TIME: 11/29/18 0900	SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS	
All checked: Yes No NA	Ice: Yes No NA	Temperature: Min: 2.0 Max:	Custody Seal: Intact Broken Not Present
# of Coolers	Cooler ID:		

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2612012

PM: BM **Due Date: 12/06/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83

Type of Ice: (Wet) Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature 2.0

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 11/29/18 DK

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 27, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2612013

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2612013

Pennsylvania Certification IDs

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
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2612013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2612013001	**BRGWC-45**	Water	11/28/18 16:05	11/29/18 09:00
2612013002	**BRGWC-47**	Water	11/28/18 11:05	11/29/18 09:00
2612013003	**BRGWC-50**	Water	11/28/18 12:15	11/29/18 09:00
2612013004	**BRGWC-52**	Water	11/28/18 14:35	11/29/18 09:00
2612013005	**FB-1**	Water	11/28/18 11:30	11/29/18 09:00
2612013006	**EB-1**	Water	11/28/18 16:45	11/29/18 09:00
2612013007	**FD-1**	Water	11/28/18 00:00	11/29/18 09:00

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2612013

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2612013001	**BRGWC-45**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612013002	**BRGWC-47**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612013003	**BRGWC-50**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612013004	**BRGWC-52**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612013005	**FB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612013006	**EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612013007	**FD-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: BRGWC-45 **Lab ID: 2612013001** Collected: 11/28/18 16:05 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.429 ± 0.192 (0.186) C:89% T:NA**	pCi/L	12/10/18 10:50	13982-63-3	
Radium-228	EPA 9320	**0.472 ± 0.459 (0.945) C:79% T:74%**	pCi/L	12/21/18 12:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.901 ± 0.651 (1.13)**	pCi/L	12/27/18 11:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: BRGWC-47 **Lab ID: 2612013002** Collected: 11/28/18 11:05 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.682 ± 0.244 (0.212) C:97% T:NA**	pCi/L	12/10/18 10:50	13982-63-3	
Radium-228	EPA 9320	**0.985 ± 0.543 (0.985) C:76% T:78%**	pCi/L	12/21/18 12:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.67 ± 0.787 (1.20)**	pCi/L	12/26/18 12:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: BRGWC-50 **Lab ID: 2612013003** Collected: 11/28/18 12:15 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.675 ± 0.237 (0.211) C:101% T:NA**	pCi/L	12/10/18 10:50	13982-63-3	
Radium-228	EPA 9320	**1.08 ± 0.600 (1.12) C:74% T:82%**	pCi/L	12/21/18 12:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.76 ± 0.837 (1.33)**	pCi/L	12/27/18 11:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: BRGWC-52 **Lab ID: 2612013004** Collected: 11/28/18 14:35 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.592 ± 0.231 (0.216) C:88% T:NA**	pCi/L	12/10/18 10:50	13982-63-3	
Radium-228	EPA 9320	**0.474 ± 0.449 (0.919) C:80% T:79%**	pCi/L	12/21/18 12:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.680 (1.14)**	pCi/L	12/27/18 11:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: FB-1 **Lab ID: 2612013005** Collected: 11/28/18 11:30 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.353 ± 0.169 (0.197) C:100% T:NA**	pCi/L	12/10/18 10:50	13982-63-3	
Radium-228	EPA 9320	**0.215 ± 0.392 (0.859) C:78% T:85%**	pCi/L	12/21/18 12:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.568 ± 0.561 (1.06)**	pCi/L	12/27/18 11:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: EB-1 **Lab ID: 2612013006** Collected: 11/28/18 16:45 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.211 ± 0.137 (0.198) C:95% T:NA**	pCi/L	12/10/18 10:50	13982-63-3	
Radium-228	EPA 9320	**0.294 ± 0.395 (0.846) C:80% T:85%**	pCi/L	12/21/18 12:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.505 ± 0.532 (1.04)**	pCi/L	12/27/18 11:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

Sample: FD-1 **Lab ID: 2612013007** Collected: 11/28/18 00:00 Received: 11/29/18 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.752 ± 0.280 (0.255) C:78% T:NA**	pCi/L	12/10/18 09:14	13982-63-3	
Radium-228	EPA 9320	**2.02 ± 0.711 (1.03) C:77% T:71%**	pCi/L	12/21/18 12:46	15262-20-1	
Total Radium	Total Radium Calculation	**2.77 ± 0.991 (1.29)**	pCi/L	12/26/18 12:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

QC Batch: 323016 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2612013001, 2612013002, 2612013003, 2612013004, 2612013005, 2612013006, 2612013007

METHOD BLANK: 1574401 Matrix: Water
Associated Lab Samples: 2612013001, 2612013002, 2612013003, 2612013004, 2612013005, 2612013006, 2612013007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.634 ± 0.372 (0.668) C:75% T:88%	pCi/L	12/21/18 12:44	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2612013

QC Batch: 322881 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2612013001, 2612013002, 2612013003, 2612013004, 2612013005, 2612013006, 2612013007

METHOD BLANK: 1573632 Matrix: Water
Associated Lab Samples: 2612013001, 2612013002, 2612013003, 2612013004, 2612013005, 2612013006, 2612013007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.299 ± 0.165 (0.232) C:101% T:NA	pCi/L	12/10/18 09:07	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 2612013

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2612013

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2612013001	**BRGWC-45**	EPA 9315	322881		
2612013002	**BRGWC-47**	EPA 9315	322881		
2612013003	**BRGWC-50**	EPA 9315	322881		
2612013004	**BRGWC-52**	EPA 9315	322881		
2612013005	**FB-1**	EPA 9315	322881		
2612013006	**EB-1**	EPA 9315	322881		
2612013007	**FD-1**	EPA 9315	322881		
2612013001	**BRGWC-45**	EPA 9320	323016		
2612013002	**BRGWC-47**	EPA 9320	323016		
2612013003	**BRGWC-50**	EPA 9320	323016		
2612013004	**BRGWC-52**	EPA 9320	323016		
2612013005	**FB-1**	EPA 9320	323016		
2612013006	**EB-1**	EPA 9320	323016		
2612013007	**FD-1**	EPA 9320	323016		
2612013001	**BRGWC-45**	Total Radium Calculation	325313		
2612013002	**BRGWC-47**	Total Radium Calculation	325154		
2612013003	**BRGWC-50**	Total Radium Calculation	325313		
2612013004	**BRGWC-52**	Total Radium Calculation	325313		
2612013005	**FB-1**	Total Radium Calculation	325313		
2612013006	**EB-1**	Total Radium Calculation	325313		
2612013007	**FD-1**	Total Radium Calculation	325154		

WO# : 2612013

2612013

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE								P	P	P							
PRESERVATION								3&7	7	3&7							
11/28/18	1605	GW		x	BRGWC-45	4		X	X	X							
11/28/18	1105	GW		x	BRGWC-47	4		X	X	X							
11/28/18	1215	GW		x	BRGWC-50	6		X	X	X							Extra Radium
11/28/18	1435	GW		x	BRGWC-52	4		X	X	X							
11/28/18	1130	W		x	FB-1	4		X	X	X							
11/28/18	1645	W		x	EB-1	4		X	X	X							
11/28/18	–	GW		X	FD-1	4		X	X	X							

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

SAMPLED BY AND TITLE: Kurn Mullen	DATE/TIME: 11-29-18 / 900	RELINQUISHED BY: Kurn Mullen	DATE/TIME: 11-29-18 / 0900
RECEIVED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:
RECEIVED BY LAB: Rachel Kirkman	DATE/TIME: 11/29/18 0900	SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS	
Ice: Yes No NA	Temperature: Min: 2.0 Max:	Custody Seal: Intact Broken Not Present	# of Coolers / Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2612013

PM: BM **Due Date: 12/28/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.0 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/29/18 MK

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑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-ALL-C003rev.3, 11September2006

LABORATORY ANALYTICAL DATA

December 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 27, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on December 19, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2612884001	**BRGWA-12S**	Water	12/18/18 10:05	12/19/18 09:15
2612884002	**BRGWA-12I**	Water	12/18/18 12:20	12/19/18 09:15
2612884003	**BRGWA-23S**	Water	12/18/18 15:05	12/19/18 09:15
2612884004	**BRGWC-25I**	Water	12/18/18 12:55	12/19/18 09:15
2612884005	**BRGWC-29I**	Water	12/18/18 15:25	12/19/18 09:15
2612884006	**BRGWC-30I**	Water	12/18/18 16:30	12/19/18 09:15

Pace Analytical Services, LLC
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2612884001	**BRGWA-12S**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612884002	**BRGWA-12I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612884003	**BRGWA-23S**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612884004	**BRGWC-25I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612884005	**BRGWC-29I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2612884006	**BRGWC-30I**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Sample: BRGWA-12S **Lab ID: 2612884001** Collected: 12/18/18 10:05 Received: 12/19/18 09:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/20/18 11:51	12/21/18 14:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/20/18 11:51	12/21/18 14:40	7440-38-2	
Barium	**0.056**	mg/L	0.010	0.00078	1	12/20/18 11:51	12/21/18 14:40	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/20/18 11:51	12/21/18 14:40	7440-41-7	
Boron	**0.0053J**	mg/L	0.040	0.0039	1	12/20/18 11:51	12/21/18 14:40	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/20/18 11:51	12/21/18 14:40	7440-43-9	
Calcium	**5.5**	mg/L	0.50	0.014	1	12/20/18 11:51	12/21/18 14:40	7440-70-2	
Chromium	**0.0022J**	mg/L	0.010	0.0016	1	12/20/18 11:51	12/21/18 14:40	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/20/18 11:51	12/21/18 14:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/20/18 11:51	12/21/18 14:40	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	12/20/18 11:51	12/21/18 14:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/20/18 11:51	12/21/18 14:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/20/18 11:51	12/21/18 14:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/20/18 11:51	12/21/18 14:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/21/18 09:27	12/21/18 13:22	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**85.0**	mg/L	25.0	10.0	1		12/20/18 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	0.25	0.024	1		12/26/18 15:37	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		12/26/18 15:37	16984-48-8	
Sulfate	**0.66J**	mg/L	1.0	0.017	1		12/26/18 15:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Sample: BRGWA-12I **Lab ID: 2612884002** Collected: 12/18/18 12:20 Received: 12/19/18 09:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0090**	mg/L	0.0030	0.00078	1	12/20/18 11:51	12/21/18 14:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/20/18 11:51	12/21/18 14:52	7440-38-2	
Barium	**0.067**	mg/L	0.010	0.00078	1	12/20/18 11:51	12/21/18 14:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/20/18 11:51	12/21/18 14:52	7440-41-7	
Boron	**0.0083J**	mg/L	0.040	0.0039	1	12/20/18 11:51	12/21/18 14:52	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/20/18 11:51	12/21/18 14:52	7440-43-9	
Calcium	**18.7J**	mg/L	25.0	0.69	50	12/20/18 11:51	12/21/18 14:57	7440-70-2	D3
Chromium	**0.0016J**	mg/L	0.010	0.0016	1	12/20/18 11:51	12/21/18 14:52	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/20/18 11:51	12/21/18 14:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/20/18 11:51	12/21/18 14:52	7439-92-1	
Lithium	**0.0038J**	mg/L	0.050	0.00097	1	12/20/18 11:51	12/21/18 14:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/20/18 11:51	12/21/18 14:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/20/18 11:51	12/21/18 14:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/20/18 11:51	12/21/18 14:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/21/18 09:27	12/21/18 13:36	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**135**	mg/L	25.0	10.0	1		12/20/18 11:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.8**	mg/L	0.25	0.024	1		12/26/18 16:39	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		12/26/18 16:39	16984-48-8	
Sulfate	**2.1**	mg/L	1.0	0.017	1		12/26/18 16:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Sample: BRGWA-23S **Lab ID: 2612884003** Collected: 12/18/18 15:05 Received: 12/19/18 09:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/20/18 11:51	12/21/18 15:03	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/20/18 11:51	12/21/18 15:03	7440-38-2	
Barium	**0.13**	mg/L	0.010	0.00078	1	12/20/18 11:51	12/21/18 15:03	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/20/18 11:51	12/21/18 15:03	7440-41-7	
Boron	**0.055**	mg/L	0.040	0.0039	1	12/20/18 11:51	12/21/18 15:03	7440-42-8	
Cadmium	**0.00010J**	mg/L	0.0010	0.000093	1	12/20/18 11:51	12/21/18 15:03	7440-43-9	
Calcium	**16.8J**	mg/L	25.0	0.69	50	12/20/18 11:51	12/21/18 15:09	7440-70-2	D3
Chromium	ND	mg/L	0.010	0.0016	1	12/20/18 11:51	12/21/18 15:03	7440-47-3	
Cobalt	**0.0057J**	mg/L	0.010	0.00052	1	12/20/18 11:51	12/21/18 15:03	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/20/18 11:51	12/21/18 15:03	7439-92-1	
Lithium	**0.0091J**	mg/L	0.050	0.00097	1	12/20/18 11:51	12/21/18 15:03	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/20/18 11:51	12/21/18 15:03	7439-98-7	
Selenium	**0.0044J**	mg/L	0.010	0.0014	1	12/20/18 11:51	12/21/18 15:03	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/20/18 11:51	12/21/18 15:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/21/18 09:27	12/21/18 13:38	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**208**	mg/L	25.0	10.0	1		12/20/18 11:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.9**	mg/L	0.25	0.024	1		12/26/18 17:41	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		12/26/18 17:41	16984-48-8	
Sulfate	**83.4**	mg/L	10.0	0.17	10		12/26/18 17:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Sample: BRGWC-25I **Lab ID: 2612884004** Collected: 12/18/18 12:55 Received: 12/19/18 09:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/20/18 11:51	12/21/18 15:15	7440-36-0	
Arsenic	**0.00091J**	mg/L	0.0050	0.00057	1	12/20/18 11:51	12/21/18 15:15	7440-38-2	
Barium	**0.030**	mg/L	0.010	0.00078	1	12/20/18 11:51	12/21/18 15:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/20/18 11:51	12/21/18 15:15	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	12/20/18 11:51	12/21/18 15:15	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/20/18 11:51	12/21/18 15:15	7440-43-9	
Calcium	**54.7**	mg/L	25.0	0.69	50	12/20/18 11:51	12/21/18 15:20	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/20/18 11:51	12/21/18 15:15	7440-47-3	
Cobalt	**0.0055J**	mg/L	0.010	0.00052	1	12/20/18 11:51	12/21/18 15:15	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/20/18 11:51	12/21/18 15:15	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	12/20/18 11:51	12/21/18 15:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/20/18 11:51	12/21/18 15:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/20/18 11:51	12/21/18 15:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/20/18 11:51	12/21/18 15:15	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/21/18 09:27	12/21/18 13:41	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**401**	mg/L	25.0	10.0	1		12/20/18 11:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.2**	mg/L	0.25	0.024	1		12/26/18 18:22	16887-00-6	
Fluoride	**0.29J**	mg/L	0.30	0.029	1		12/26/18 18:22	16984-48-8	
Sulfate	**231**	mg/L	25.0	0.42	25		12/26/18 18:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Sample: BRGWC-29I **Lab ID: 2612884005** Collected: 12/18/18 15:25 Received: 12/19/18 09:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/20/18 11:51	12/21/18 15:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/20/18 11:51	12/21/18 15:45	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	12/20/18 11:51	12/21/18 15:45	7440-39-3	
Beryllium	**0.00071J**	mg/L	0.0030	0.000050	1	12/20/18 11:51	12/21/18 15:45	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	12/20/18 11:51	12/21/18 15:45	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/20/18 11:51	12/21/18 15:45	7440-43-9	
Calcium	**52.9**	mg/L	25.0	0.69	50	12/20/18 11:51	12/21/18 15:50	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/20/18 11:51	12/21/18 15:45	7440-47-3	
Cobalt	**0.0067J**	mg/L	0.010	0.00052	1	12/20/18 11:51	12/21/18 15:45	7440-48-4	
Lead	**0.00038J**	mg/L	0.0050	0.00027	1	12/20/18 11:51	12/21/18 15:45	7439-92-1	
Lithium	**0.0032J**	mg/L	0.050	0.00097	1	12/20/18 11:51	12/21/18 15:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/20/18 11:51	12/21/18 15:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/20/18 11:51	12/21/18 15:45	7782-49-2	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	12/20/18 11:51	12/21/18 15:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/21/18 09:27	12/21/18 13:43	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**407**	mg/L	25.0	10.0	1		12/20/18 11:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.4**	mg/L	0.25	0.024	1		12/26/18 19:03	16887-00-6	
Fluoride	**0.26J**	mg/L	0.30	0.029	1		12/26/18 19:03	16984-48-8	
Sulfate	**293**	mg/L	20.0	0.34	20		12/26/18 18:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Sample: BRGWC-30I **Lab ID: 2612884006** Collected: 12/18/18 16:30 Received: 12/19/18 09:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/20/18 11:51	12/21/18 15:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/20/18 11:51	12/21/18 15:56	7440-38-2	
Barium	**0.029**	mg/L	0.010	0.00078	1	12/20/18 11:51	12/21/18 15:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/20/18 11:51	12/21/18 15:56	7440-41-7	
Boron	**1.6**	mg/L	0.040	0.0039	1	12/20/18 11:51	12/21/18 15:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/20/18 11:51	12/21/18 15:56	7440-43-9	
Calcium	**102**	mg/L	25.0	0.69	50	12/20/18 11:51	12/21/18 16:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/20/18 11:51	12/21/18 15:56	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.010	0.00052	1	12/20/18 11:51	12/21/18 15:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/20/18 11:51	12/21/18 15:56	7439-92-1	
Lithium	**0.014J**	mg/L	0.050	0.00097	1	12/20/18 11:51	12/21/18 15:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/20/18 11:51	12/21/18 15:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/20/18 11:51	12/21/18 15:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/20/18 11:51	12/21/18 15:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/21/18 09:27	12/21/18 13:45	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**715**	mg/L	25.0	10.0	1		12/20/18 11:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		12/26/18 21:07	16887-00-6	
Fluoride	**0.54**	mg/L	0.30	0.029	1		12/26/18 21:07	16984-48-8	
Sulfate	**440**	mg/L	20.0	0.34	20		12/26/18 20:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

QC Batch: 19422 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

METHOD BLANK: 87825 Matrix: Water
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	12/21/18 13:17	

LABORATORY CONTROL SAMPLE: 87826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 87827 87828

Parameter	Units	2612884001 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	0.0027	0.0027	107	110	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

QC Batch: 19358 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

METHOD BLANK: 87378 Matrix: Water
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	12/21/18 14:26	
Arsenic	mg/L	ND	0.0050	0.00057	12/21/18 14:26	
Barium	mg/L	ND	0.010	0.00078	12/21/18 14:26	
Beryllium	mg/L	ND	0.0030	0.000050	12/21/18 14:26	
Boron	mg/L	ND	0.040	0.0039	12/21/18 14:26	
Cadmium	mg/L	ND	0.0010	0.000093	12/21/18 14:26	
Calcium	mg/L	ND	0.50	0.014	12/21/18 14:26	
Chromium	mg/L	ND	0.010	0.0016	12/21/18 14:26	
Cobalt	mg/L	ND	0.010	0.00052	12/21/18 14:26	
Lead	mg/L	ND	0.0050	0.00027	12/21/18 14:26	
Lithium	mg/L	ND	0.050	0.00097	12/21/18 14:26	
Molybdenum	mg/L	ND	0.010	0.0019	12/21/18 14:26	
Selenium	mg/L	ND	0.010	0.0014	12/21/18 14:26	
Thallium	mg/L	ND	0.0010	0.00014	12/21/18 14:26	

LABORATORY CONTROL SAMPLE: 87379

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	0.10	100	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 87380 87381

Parameter	Units	2612887003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 87380 87381

Parameter	Units	2612887003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.00097J	0.1	0.1	0.10	0.11	102	104	75-125	2	20	
Barium	mg/L	0.038	0.1	0.1	0.14	0.14	101	105	75-125	3	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Boron	mg/L	ND	1	1	0.99	0.98	99	98	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	2	20	
Calcium	mg/L	16.4J	1	1	17.5J	18.7J	110	232	75-125	7	20	M6
Chromium	mg/L	0.0032J	0.1	0.1	0.11	0.11	103	104	75-125	1	20	
Cobalt	mg/L	0.00062J	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.11	104	105	75-125	1	20	
Lithium	mg/L	0.0032J	0.1	0.1	0.10	0.10	101	99	75-125	2	20	
Molybdenum	mg/L	0.0048J	0.1	0.1	0.11	0.11	108	107	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	104	105	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

QC Batch: 19353 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

LABORATORY CONTROL SAMPLE: 87359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	84-108	

SAMPLE DUPLICATE: 87360

Parameter	Units	2612812001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	119000 ug/L	115	3	10	

SAMPLE DUPLICATE: 87361

Parameter	Units	2612814001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1040	1320	24	10	D6

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

QC Batch: 19622 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

METHOD BLANK: 88642 Matrix: Water
Associated Lab Samples: 2612884001, 2612884002, 2612884003, 2612884004, 2612884005, 2612884006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	12/26/18 14:55	
Fluoride	mg/L	ND	0.30	0.029	12/26/18 14:55	
Sulfate	mg/L	ND	1.0	0.017	12/26/18 14:55	

LABORATORY CONTROL SAMPLE: 88643

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.8	98	90-110	
Fluoride	mg/L	10	9.5	95	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 88644 88645

Parameter	Units	2612884001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.9	10	10	13.0	12.9	101	99	90-110	1	15	
Fluoride	mg/L	ND	10	10	9.8	9.7	98	97	90-110	1	15	
Sulfate	mg/L	0.66J	10	10	10.9	10.9	102	102	90-110	0	15	

MATRIX SPIKE SAMPLE: 88646

Parameter	Units	2612884002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.8	10	12.8	100	90-110	
Fluoride	mg/L	ND	10	9.9	99	90-110	
Sulfate	mg/L	2.1	10	12.3	102	90-110	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

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

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2612884

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2612884001	**BRGWA-12S**	EPA 3005A	19358	EPA 6020B	19408
2612884002	**BRGWA-12I**	EPA 3005A	19358	EPA 6020B	19408
2612884003	**BRGWA-23S**	EPA 3005A	19358	EPA 6020B	19408
2612884004	**BRGWC-25I**	EPA 3005A	19358	EPA 6020B	19408
2612884005	**BRGWC-29I**	EPA 3005A	19358	EPA 6020B	19408
2612884006	**BRGWC-30I**	EPA 3005A	19358	EPA 6020B	19408
2612884001	**BRGWA-12S**	EPA 7470A	19422	EPA 7470A	19475
2612884002	**BRGWA-12I**	EPA 7470A	19422	EPA 7470A	19475
2612884003	**BRGWA-23S**	EPA 7470A	19422	EPA 7470A	19475
2612884004	**BRGWC-25I**	EPA 7470A	19422	EPA 7470A	19475
2612884005	**BRGWC-29I**	EPA 7470A	19422	EPA 7470A	19475
2612884006	**BRGWC-30I**	EPA 7470A	19422	EPA 7470A	19475
2612884001	**BRGWA-12S**	SM 2540C	19353		
2612884002	**BRGWA-12I**	SM 2540C	19353		
2612884003	**BRGWA-23S**	SM 2540C	19353		
2612884004	**BRGWC-25I**	SM 2540C	19353		
2612884005	**BRGWC-29I**	SM 2540C	19353		
2612884006	**BRGWC-30I**	SM 2540C	19353		
2612884001	**BRGWA-12S**	EPA 300.0	19622		
2612884002	**BRGWA-12I**	EPA 300.0	19622		
2612884003	**BRGWA-23S**	EPA 300.0	19622		
2612884004	**BRGWC-25I**	EPA 300.0	19622		
2612884005	**BRGWC-29I**	EPA 300.0	19622		
2612884006	**BRGWC-30I**	EPA 300.0	19622		

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308 P: 404-506-7239

REPORT TO: Joju Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: | PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP 3 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	3	
12-18-18	1005	GW		X	BRGWA-12S	4	1	1	2	
12-18-18	1220	GW		X	BRGWA-12I	4	1	1	2	
12-18-18	1505	GW		X	BRGWA-23S	4	1	1	2	
12-18-18	1255	GW		X	BRGWL-25I	4	1	1	2	
12-18-18	1525	GW		X	BRGWL-29I	4	1	1	2	
12-18-18	1630	GW		X	BRGWC-30I	4	1	1	2	

WO#: 2612884

2612884

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Chris Tidwell & Karm McKee | DATE/TIME: 12-18-18 / 1630 | RELINQUISHED BY: | DATE/TIME: 12-19-18 / 0914

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: Rahman | DATE/TIME: 12/19/18 0915 | SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 0.1 Max: | Custody Seal: Intact Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2612884

PM: BM **Due Date: 12/27/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** (Wet) Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature 0.1 **Biological Tissue is Frozen:** Yes No

Date and Initials of person examining contents: 12/19/18 MR

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

January 10, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on December 19, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2612886001	**BRGWA-12S**	Water	12/18/18 10:05	12/19/18 09:15
2612886002	**BRGWA-12I**	Water	12/18/18 12:20	12/19/18 09:15
2612886003	**BRGWA-23S**	Water	12/18/18 15:05	12/19/18 09:15
2612886004	**BRGWC-25I**	Water	12/18/18 12:55	12/19/18 09:15
2612886005	**BRGWC-29I**	Water	12/18/18 15:25	12/19/18 09:15
2612886006	**BRGWC-30I**	Water	12/18/18 16:30	12/19/18 09:15

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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2612886001	**BRGWA-12S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612886002	**BRGWA-12I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612886003	**BRGWA-23S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612886004	**BRGWC-25I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2612886005	**BRGWC-29I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2612886006	**BRGWC-30I**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Sample: BRGWA-12S **Lab ID: 2612886001** Collected: 12/18/18 10:05 Received: 12/19/18 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.380 ± 0.180 (0.209) C:96% T:NA**	pCi/L	01/07/19 09:39	13982-63-3	
Radium-228	EPA 9320	**0.926 ± 0.401 (0.637) C:78% T:88%**	pCi/L	01/08/19 16:15	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.581 (0.846)**	pCi/L	01/09/19 11:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Sample: BRGWA-12I **Lab ID: 2612886002** Collected: 12/18/18 12:20 Received: 12/19/18 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.361 ± 0.194 (0.288) C:94% T:NA**	pCi/L	01/07/19 09:39	13982-63-3	
Radium-228	EPA 9320	**0.494 ± 0.388 (0.772) C:79% T:86%**	pCi/L	01/08/19 16:15	15262-20-1	
Total Radium	Total Radium Calculation	**0.855 ± 0.582 (1.06)**	pCi/L	01/09/19 11:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Sample: BRGWA-23S **Lab ID: 2612886003** Collected: 12/18/18 15:05 Received: 12/19/18 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.810 ± 0.275 (0.238) C:93% T:NA**	pCi/L	01/07/19 09:39	13982-63-3	
Radium-228	EPA 9320	**0.323 ± 0.459 (0.985) C:83% T:78%**	pCi/L	01/08/19 18:02	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.734 (1.22)**	pCi/L	01/09/19 11:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Sample: BRGWC-25I **Lab ID: 2612886004** Collected: 12/18/18 12:55 Received: 12/19/18 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.523 ± 0.214 (0.207) C:94% T:NA**	pCi/L	01/07/19 09:39	13982-63-3	
Radium-228	EPA 9320	**0.604 ± 0.486 (0.968) C:84% T:78%**	pCi/L	01/08/19 18:02	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.700 (1.18)**	pCi/L	01/09/19 11:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Sample: BRGWC-29I **Lab ID: 2612886005** Collected: 12/18/18 15:25 Received: 12/19/18 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.409 ± 0.192 (0.226) C:94% T:NA**	pCi/L	01/07/19 09:39	13982-63-3	
Radium-228	EPA 9320	**0.350 ± 0.422 (0.889) C:80% T:79%**	pCi/L	01/08/19 18:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.759 ± 0.614 (1.12)**	pCi/L	01/10/19 13:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Sample: BRGWC-30I **Lab ID: 2612886006** Collected: 12/18/18 16:30 Received: 12/19/18 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.539 ± 0.213 (0.197) C:97% T:NA**	pCi/L	01/07/19 11:20	13982-63-3	
Radium-228	EPA 9320	**0.122 ± 0.427 (0.965) C:82% T:81%**	pCi/L	01/08/19 18:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.661 ± 0.640 (1.16)**	pCi/L	01/10/19 13:48	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

QC Batch: 325472 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2612886001, 2612886002, 2612886003, 2612886004, 2612886005, 2612886006

METHOD BLANK: 1585943 Matrix: Water
Associated Lab Samples: 2612886001, 2612886002, 2612886003, 2612886004, 2612886005, 2612886006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.172 ± 0.135 (0.224) C:96% T:NA	pCi/L	01/07/19 08:42	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

QC Batch: 325220 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2612886001, 2612886002, 2612886003, 2612886004, 2612886005, 2612886006

METHOD BLANK: 1585108 Matrix: Water
Associated Lab Samples: 2612886001, 2612886002, 2612886003, 2612886004, 2612886005, 2612886006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.865 ± 0.376 (0.603) C:83% T:85%	pCi/L	01/08/19 16:14	

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2612886

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2612886001	**BRGWA-12S**	EPA 9315	325472		
2612886002	**BRGWA-12I**	EPA 9315	325472		
2612886003	**BRGWA-23S**	EPA 9315	325472		
2612886004	**BRGWC-25I**	EPA 9315	325472		
2612886005	**BRGWC-29I**	EPA 9315	325472		
2612886006	**BRGWC-30I**	EPA 9315	325472		
2612886001	**BRGWA-12S**	EPA 9320	325220		
2612886002	**BRGWA-12I**	EPA 9320	325220		
2612886003	**BRGWA-23S**	EPA 9320	325220		
2612886004	**BRGWC-25I**	EPA 9320	325220		
2612886005	**BRGWC-29I**	EPA 9320	325220		
2612886006	**BRGWC-30I**	EPA 9320	325220		
2612886001	**BRGWA-12S**	Total Radium Calculation	326351		
2612886002	**BRGWA-12I**	Total Radium Calculation	326351		
2612886003	**BRGWA-23S**	Total Radium Calculation	326351		
2612886004	**BRGWC-25I**	Total Radium Calculation	326351		
2612886005	**BRGWC-29I**	Total Radium Calculation	326480		
2612886006	**BRGWC-30I**	Total Radium Calculation	326480		

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308 P. 404-506-7239

REPORT TO: Joju Abraham CC: Maria Pedilla

REQUESTED COMPLETION DATE: PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP 3 (EPA 6020/7470)	TDS, Cl, F, SO4 (EPA 300.0 & SM2540C)	Radium 226 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	3	
12-18-18	1005	GW		X	BRGWA-12S	4	1	1	2	
12-18-18	1220	GW		X	BRGWA-12I	4	1	1	2	
12-18-18	1505	GW		X	BRGWA-23S	4	1	1	2	
12-18-18	1255	GW		X	BRGWL-25I	4	1	1	2	
12-18-18	1525	GW		X	BRGWL-29I	4	1	1	2	
12-18-18	1630	GW		X	BRGWL-30I	4	1	1	2	

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 2612886

2612886

SAMPLED BY AND TITLE: Chris Tidwell & Karen Markee
DATE/TIME: 12-18-18 / 1630
RELINQUISHED BY:
DATE/TIME: 12-19-18 / 0114

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Nadiman
DATE/TIME: 12/19/18 0915

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.1 Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2612886

PM: BM Due Date: 01/18/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.1 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 12/19/18 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 28, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on December 20, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Atlanta Certification IDs

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
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613019001	**BRGWC-50**	Water	12/19/18 10:45	12/20/18 15:40
2613019002	**BRGWC-32S**	Water	12/19/18 12:15	12/20/18 15:40
2613019003	**BRGWC-47**	Water	12/19/18 14:30	12/20/18 15:40
2613019004	**Dup-3**	Water	12/20/18 00:00	12/20/18 15:40
2613019005	**BRGWC-27I**	Water	12/20/18 10:08	12/20/18 15:40
2613019006	**RB-2**	Water	12/20/18 10:00	12/20/18 15:40
2613019007	**FB-2**	Water	12/20/18 10:05	12/20/18 15:40
2613019008	**FB-3**	Water	12/20/18 10:20	12/20/18 15:40
2613019009	**BRGWC-45**	Water	12/20/18 10:30	12/20/18 15:40
2613019010	**BRGWC-52**	Water	12/20/18 11:40	12/20/18 15:40

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2613019001	BRGWC-50	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019002	BRGWC-32S	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019003	BRGWC-47	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019004	Dup-3	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019005	BRGWC-27I	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019006	RB-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019007	FB-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019008	FB-3	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019009	BRGWC-45	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2613019010	BRGWC-52	EPA 6020B	CSW	14

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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: BRGWC-50 **Lab ID: 2613019001** Collected: 12/19/18 10:45 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 13:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 13:56	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 13:56	7440-39-3	
Beryllium	**0.0043**	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 13:56	7440-41-7	
Boron	**0.35**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 13:56	7440-42-8	
Cadmium	**0.042**	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 13:56	7440-43-9	
Calcium	**252**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 14:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 13:56	7440-47-3	
Cobalt	**1.5**	mg/L	0.50	0.026	50	12/24/18 11:40	12/26/18 14:02	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 13:56	7439-92-1	
Lithium	**0.043J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 13:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 13:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 13:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 13:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 13:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2190**	mg/L	25.0	10.0	1		12/21/18 13:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.3**	mg/L	0.25	0.024	1		12/28/18 02:22	16887-00-6	M1
Fluoride	**0.54**	mg/L	0.30	0.029	1		12/28/18 02:22	16984-48-8	
Sulfate	**1650**	mg/L	50.0	0.85	50		12/28/18 10:10	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: BRGWC-32S **Lab ID: 2613019002** Collected: 12/19/18 12:15 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 14:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 14:08	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 14:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 14:08	7440-41-7	
Boron	**1.6**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 14:08	7440-42-8	
Cadmium	**0.00012J**	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 14:08	7440-43-9	B
Calcium	**61.2**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 14:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 14:08	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 14:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 14:08	7439-92-1	
Lithium	**0.0018J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 14:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 14:08	7439-98-7	
Selenium	**0.0059J**	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 14:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 14:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:04	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**605**	mg/L	25.0	10.0	1		12/21/18 13:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.0**	mg/L	0.25	0.024	1		12/28/18 03:27	16887-00-6	
Fluoride	**0.23J**	mg/L	0.30	0.029	1		12/28/18 03:27	16984-48-8	
Sulfate	**370**	mg/L	20.0	0.34	20		12/28/18 10:33	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: BRGWC-47 **Lab ID: 2613019003** Collected: 12/19/18 14:30 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 14:19	7440-36-0	
Arsenic	**0.00075J**	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 14:19	7440-38-2	
Barium	**0.040**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 14:19	7440-39-3	
Beryllium	**0.000060J**	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 14:19	7440-41-7	B
Boron	**0.41**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 14:19	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 14:19	7440-43-9	
Calcium	**330**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 14:25	7440-70-2	
Chromium	**0.0018J**	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 14:19	7440-47-3	
Cobalt	**0.0014J**	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 14:19	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 14:19	7439-92-1	
Lithium	**0.043J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 14:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 14:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 14:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 14:19	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:07	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2060**	mg/L	25.0	10.0	1		12/21/18 13:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.5**	mg/L	0.25	0.024	1		12/28/18 03:49	16887-00-6	
Fluoride	**0.28J**	mg/L	0.30	0.029	1		12/28/18 03:49	16984-48-8	
Sulfate	**1520**	mg/L	50.0	0.85	50		12/28/18 10:56	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: Dup-3 **Lab ID: 2613019004** Collected: 12/20/18 00:00 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 14:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 14:31	7440-38-2	
Barium	**0.014**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 14:31	7440-39-3	
Beryllium	**0.000099J**	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 14:31	7440-41-7	B
Boron	**1.4**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 14:31	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 14:31	7440-43-9	
Calcium	**62.7**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 14:37	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 14:31	7440-47-3	
Cobalt	**0.0078J**	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 14:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 14:31	7439-92-1	
Lithium	**0.0015J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 14:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 14:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 14:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 14:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**350**	mg/L	25.0	10.0	1		12/21/18 13:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	0.25	0.024	1		12/28/18 04:11	16887-00-6	
Fluoride	**0.22J**	mg/L	0.30	0.029	1		12/28/18 04:11	16984-48-8	
Sulfate	**196**	mg/L	20.0	0.34	20		12/28/18 11:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: BRGWC-27I **Lab ID: 2613019005** Collected: 12/20/18 10:08 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 15:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 15:04	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 15:04	7440-39-3	
Beryllium	**0.00012J**	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 15:04	7440-41-7	B
Boron	**1.4**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 15:04	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 15:04	7440-43-9	
Calcium	**63.9**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 15:10	7440-70-2	
Chromium	**0.0030J**	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 15:04	7440-47-3	
Cobalt	**0.0081J**	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 15:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 15:04	7439-92-1	
Lithium	**0.0015J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 15:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 15:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 15:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 15:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:11	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**344**	mg/L	25.0	10.0	1		12/21/18 14:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	0.25	0.024	1		12/28/18 04:33	16887-00-6	
Fluoride	**0.26J**	mg/L	0.30	0.029	1		12/28/18 04:33	16984-48-8	
Sulfate	**200**	mg/L	20.0	0.34	20		12/28/18 12:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: RB-2 **Lab ID: 2613019006** Collected: 12/20/18 10:00 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 15:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 15:16	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 15:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 15:16	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 15:16	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 15:16	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	12/24/18 11:40	12/26/18 15:16	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 15:16	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 15:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 15:16	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 15:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 15:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 15:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 15:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:14	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**16.0J**	mg/L	25.0	10.0	1		12/21/18 14:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.12J**	mg/L	0.25	0.024	1		12/28/18 04:54	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		12/28/18 04:54	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		12/28/18 04:54	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: FB-2 **Lab ID: 2613019007** Collected: 12/20/18 10:05 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 15:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 15:22	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 15:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 15:22	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 15:22	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 15:22	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	12/24/18 11:40	12/26/18 15:22	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 15:22	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 15:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 15:22	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 15:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 15:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 15:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 15:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**17.0J**	mg/L	25.0	10.0	1		12/21/18 14:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.083J**	mg/L	0.25	0.024	1		12/28/18 05:16	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		12/28/18 05:16	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		12/28/18 05:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: FB-3 **Lab ID: 2613019008** Collected: 12/20/18 10:20 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 15:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 15:27	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 15:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 15:27	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 15:27	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 15:27	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	12/24/18 11:40	12/26/18 15:27	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 15:27	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 15:27	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 15:27	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 15:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 15:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 15:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 15:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**20.0J**	mg/L	25.0	10.0	1		12/21/18 14:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.12J**	mg/L	0.25	0.024	1		12/28/18 05:38	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		12/28/18 05:38	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		12/28/18 05:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: BRGWC-45 **Lab ID: 2613019009** Collected: 12/20/18 10:30 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0024J**	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 15:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 15:33	7440-38-2	
Barium	**0.093**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 15:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 15:33	7440-41-7	
Boron	**0.028J**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 15:33	7440-42-8	
Cadmium	**0.00029J**	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 15:33	7440-43-9	B
Calcium	**39.0**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 15:39	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 15:33	7440-47-3	
Cobalt	**0.069**	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 15:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 15:33	7439-92-1	
Lithium	**0.0030J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 15:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 15:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 15:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 15:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:21	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**322**	mg/L	25.0	10.0	1		12/21/18 14:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**47.2**	mg/L	0.25	0.024	1		12/28/18 07:27	16887-00-6	
Fluoride	**0.12J**	mg/L	0.30	0.029	1		12/28/18 07:27	16984-48-8	
Sulfate	**113**	mg/L	10.0	0.17	10		12/28/18 12:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Sample: BRGWC-52 **Lab ID: 2613019010** Collected: 12/20/18 11:40 Received: 12/20/18 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	12/24/18 11:40	12/26/18 15:45	7440-36-0	
Arsenic	**0.0032J**	mg/L	0.0050	0.00057	1	12/24/18 11:40	12/26/18 15:45	7440-38-2	
Barium	**0.013**	mg/L	0.010	0.00078	1	12/24/18 11:40	12/26/18 15:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	12/24/18 11:40	12/26/18 15:45	7440-41-7	
Boron	**1.6**	mg/L	0.040	0.0039	1	12/24/18 11:40	12/26/18 15:45	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	12/24/18 11:40	12/26/18 15:45	7440-43-9	
Calcium	**43.2**	mg/L	25.0	0.69	50	12/24/18 11:40	12/26/18 15:50	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	12/24/18 11:40	12/26/18 15:45	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	12/24/18 11:40	12/26/18 15:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	12/24/18 11:40	12/26/18 15:45	7439-92-1	
Lithium	**0.0042J**	mg/L	0.050	0.00097	1	12/24/18 11:40	12/26/18 15:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	12/24/18 11:40	12/26/18 15:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	12/24/18 11:40	12/26/18 15:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/18 11:40	12/26/18 15:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	12/24/18 09:29	12/24/18 14:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**355**	mg/L	25.0	10.0	1		12/21/18 14:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.6**	mg/L	0.25	0.024	1		12/28/18 07:49	16887-00-6	
Fluoride	**0.30**	mg/L	0.30	0.029	1		12/28/18 07:49	16984-48-8	
Sulfate	**150**	mg/L	50.0	0.85	50		12/28/18 12:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

QC Batch: 19557 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

METHOD BLANK: 88494 Matrix: Water
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	12/24/18 13:45	

LABORATORY CONTROL SAMPLE: 88495

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: 88496 88497

Parameter	Units	2613019001 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	0.0023	92	92	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

QC Batch: 19572 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

METHOD BLANK: 88528 Matrix: Water
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	12/26/18 13:45	
Arsenic	mg/L	ND	0.0050	0.00057	12/26/18 13:45	
Barium	mg/L	ND	0.010	0.00078	12/26/18 13:45	
Beryllium	mg/L	0.00012J	0.0030	0.000050	12/26/18 13:45	
Boron	mg/L	ND	0.040	0.0039	12/26/18 13:45	
Cadmium	mg/L	0.00021J	0.0010	0.000093	12/26/18 13:45	
Calcium	mg/L	ND	0.50	0.014	12/26/18 13:45	
Chromium	mg/L	ND	0.010	0.0016	12/26/18 13:45	
Cobalt	mg/L	ND	0.010	0.00052	12/26/18 13:45	
Lead	mg/L	ND	0.0050	0.00027	12/26/18 13:45	
Lithium	mg/L	ND	0.050	0.00097	12/26/18 13:45	
Molybdenum	mg/L	ND	0.010	0.0019	12/26/18 13:45	
Selenium	mg/L	ND	0.010	0.0014	12/26/18 13:45	
Thallium	mg/L	0.00015J	0.0010	0.00014	12/26/18 13:45	

LABORATORY CONTROL SAMPLE: 88529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.11	111	80-120	
Boron	mg/L	1	1.1	112	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Calcium	mg/L	1	1.1	105	80-120	
Chromium	mg/L	0.1	0.11	105	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.11	107	80-120	
Selenium	mg/L	0.1	0.11	106	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		88560			88561							
Parameter	Units	2613031001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	109	112	75-125	3	20	
Arsenic	mg/L	0.18	0.1	0.1	0.29	0.29	106	106	75-125	0	20	
Barium	mg/L	0.13	0.1	0.1	0.23	0.23	97	100	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20	
Boron	mg/L	0.37	1	1	1.4	1.5	101	108	75-125	5	20	
Cadmium	mg/L	ND	0.1	0.1	0.11	0.11	110	109	75-125	1	20	
Calcium	mg/L	50.7	1	1	51.4	52.8	62	202	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	107	108	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	103	104	75-125	1	20	
Lead	mg/L	0.00028J	0.1	0.1	0.10	0.11	102	105	75-125	3	20	
Lithium	mg/L	0.013J	0.1	0.1	0.11	0.11	97	102	75-125	4	20	
Molybdenum	mg/L	0.023	0.1	0.1	0.13	0.14	111	112	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	105	103	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	100	103	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

QC Batch: 19449 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

LABORATORY CONTROL SAMPLE: 87892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	396	99	84-108	

SAMPLE DUPLICATE: 87893

Parameter	Units	2612966001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1190	1190	0	10	

SAMPLE DUPLICATE: 87894

Parameter	Units	2613021001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	500	505	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

QC Batch: 19708 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

METHOD BLANK: 88889 Matrix: Water
Associated Lab Samples: 2613019001, 2613019002, 2613019003, 2613019004, 2613019005, 2613019006, 2613019007, 2613019008, 2613019009, 2613019010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.11J	0.25	0.024	12/28/18 01:38	
Fluoride	mg/L	ND	0.30	0.029	12/28/18 01:38	
Sulfate	mg/L	ND	1.0	0.017	12/28/18 01:38	

LABORATORY CONTROL SAMPLE: 88890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	10.0	100	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 88891 88892

Parameter	Units	2613019001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	23.3	10	10	30.3	30.2	70	69	90-110	0	15	M1
Fluoride	mg/L	0.54	10	10	11.1	10.9	106	104	90-110	2	15	
Sulfate	mg/L	1650	10	10	557	558	-10900	-10900	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 88893

Parameter	Units	2613019002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	7.0	10	16.6	95	90-110	
Fluoride	mg/L	0.23J	10	10.5	103	90-110	
Sulfate	mg/L	370	10	235	-1360	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

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.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2613019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613019001	BRGWC-50	EPA 3005A	19572	EPA 6020B	19609
2613019002	BRGWC-32S	EPA 3005A	19572	EPA 6020B	19609
2613019003	BRGWC-47	EPA 3005A	19572	EPA 6020B	19609
2613019004	Dup-3	EPA 3005A	19572	EPA 6020B	19609
2613019005	BRGWC-27I	EPA 3005A	19572	EPA 6020B	19609
2613019006	RB-2	EPA 3005A	19572	EPA 6020B	19609
2613019007	FB-2	EPA 3005A	19572	EPA 6020B	19609
2613019008	FB-3	EPA 3005A	19572	EPA 6020B	19609
2613019009	BRGWC-45	EPA 3005A	19572	EPA 6020B	19609
2613019010	BRGWC-52	EPA 3005A	19572	EPA 6020B	19609
2613019001	BRGWC-50	EPA 7470A	19557	EPA 7470A	19591
2613019002	BRGWC-32S	EPA 7470A	19557	EPA 7470A	19591
2613019003	BRGWC-47	EPA 7470A	19557	EPA 7470A	19591
2613019004	Dup-3	EPA 7470A	19557	EPA 7470A	19591
2613019005	BRGWC-27I	EPA 7470A	19557	EPA 7470A	19591
2613019006	RB-2	EPA 7470A	19557	EPA 7470A	19591
2613019007	FB-2	EPA 7470A	19557	EPA 7470A	19591
2613019008	FB-3	EPA 7470A	19557	EPA 7470A	19591
2613019009	BRGWC-45	EPA 7470A	19557	EPA 7470A	19591
2613019010	BRGWC-52	EPA 7470A	19557	EPA 7470A	19591
2613019001	BRGWC-50	SM 2540C	19449		
2613019002	BRGWC-32S	SM 2540C	19449		
2613019003	BRGWC-47	SM 2540C	19449		
2613019004	Dup-3	SM 2540C	19449		
2613019005	BRGWC-27I	SM 2540C	19449		
2613019006	RB-2	SM 2540C	19449		
2613019007	FB-2	SM 2540C	19449		
2613019008	FB-3	SM 2540C	19449		
2613019009	BRGWC-45	SM 2540C	19449		
2613019010	BRGWC-52	SM 2540C	19449		
2613019001	BRGWC-50	EPA 300.0	19708		
2613019002	BRGWC-32S	EPA 300.0	19708		
2613019003	BRGWC-47	EPA 300.0	19708		
2613019004	Dup-3	EPA 300.0	19708		
2613019005	BRGWC-27I	EPA 300.0	19708		
2613019006	RB-2	EPA 300.0	19708		
2613019007	FB-2	EPA 300.0	19708		
2613019008	FB-3	EPA 300.0	19708		
2613019009	BRGWC-45	EPA 300.0	19708		
2613019010	BRGWC-52	EPA 300.0	19708		

CHAIN OF CUSTODY RECORD

Pace Analytical
www.paceanalytical.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE 30308
Atlanta, GA 30303 P. 404-506-7234

REPORT TO: Jojo Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: jahraham@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE	PRESERVATION	Metals, APP3 & 4 (EPA 6020 / 7470)	TDS, Cl, F, SO4 (EPA 300.0 + SM2540C)	Radium 226 & 228 (9315 / 9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:				P	P	P		
					PRESERVATION:				3	7	3		
12-19-18	1045	GW		X	BRGWC-50	4			1	1	2		
12-19-18	1215	GW		X	BRGWC-32S	4			1	1	2		
12-19-18	1430	GW		X	BRGWC-47	4			1	1	2		
12-20-18	—	GW		X	DUP-3	4			1	1	2		
12-20-18	1008	GW		X	BRGWC-27F	6			1	1	4		+2 Radium
12-20-18	1000	W		X	RB-2	4			1	1	2		
12-20-18	1005	W		X	FB-2	4			1	1	2		
12-20-18	1020	W		X	FB-3	4			1	1	2		
12-20-18	1030	GW		X	BRGWC-45	4			1	1	2		
12-20-18	1140	GW		X	BRGWC-52	4			1	1	2		

WO#: 2613019

2613019

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: Travis Martinez & Karen Minkus
DATE/TIME: 12-20-18 1330

RELINQUISHED BY:
DATE/TIME: 12-20-18 1540

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 12/20/18 1540

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Custody Seal: Intact Broken Not Present N/A
# of Coolers:
Cooler ID:

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.2 Max

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2613019

PM: BM **Due Date: 12/28/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 23 **Type of Ice:** (Wet) Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 **Biological Tissue is Frozen:** Yes No

Date and Initials of person examining contents: 12/20/18 MR

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

January 16, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on December 20, 2018. 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613020001	**BRGWC-50**	Water	12/19/18 10:45	12/20/18 15:40
2613020002	**BRGWC-32S**	Water	12/19/18 12:15	12/20/18 15:40
2613020003	**BRGWC-47**	Water	12/19/18 14:30	12/20/18 15:40
2613020004	**Dup-3**	Water	12/20/18 00:00	12/20/18 15:40
2613020005	**BRGWC-27I**	Water	12/20/18 10:08	12/20/18 15:40
2613020006	**RB-2**	Water	12/20/18 10:00	12/20/18 15:40
2613020007	**FB-2**	Water	12/20/18 10:05	12/20/18 15:40
2613020008	**FB-3**	Water	12/20/18 10:20	12/20/18 15:40
2613020009	**BRGWC-45**	Water	12/20/18 10:30	12/20/18 15:40
2613020010	**BRGWC-52**	Water	12/20/18 11:40	12/20/18 15:40

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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613020001	BRGWC-50	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020002	BRGWC-32S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020003	BRGWC-47	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020004	Dup-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020005	BRGWC-27I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020006	RB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020007	FB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020008	FB-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020009	BRGWC-45	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2613020010	BRGWC-52	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: BRGWC-50 **Lab ID: 2613020001** Collected: 12/19/18 10:45 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.856 ± 0.349 (0.375) C:97% T:NA**	pCi/L	01/08/19 08:01	13982-63-3	
Radium-228	EPA 9320	**1.29 ± 0.523 (0.842) C:78% T:81%**	pCi/L	01/09/19 16:07	15262-20-1	
Total Radium	Total Radium Calculation	**2.15 ± 0.872 (1.22)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: BRGWC-32S **Lab ID: 2613020002** Collected: 12/19/18 12:15 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.379 ± 0.258 (0.425) C:97% T:NA**	pCi/L	01/08/19 08:01	13982-63-3	
Radium-228	EPA 9320	**0.827 ± 0.462 (0.848) C:79% T:78%**	pCi/L	01/09/19 16:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.21 ± 0.720 (1.27)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: BRGWC-47 **Lab ID: 2613020003** Collected: 12/19/18 14:30 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.690 ± 0.296 (0.305) C:100% T:NA**	pCi/L	01/08/19 08:01	13982-63-3	
Radium-228	EPA 9320	**0.605 ± 0.407 (0.782) C:80% T:79%**	pCi/L	01/09/19 16:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.30 ± 0.703 (1.09)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: Dup-3 **Lab ID: 2613020004** Collected: 12/20/18 00:00 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.506 ± 0.296 (0.471) C:93% T:NA**	pCi/L	01/08/19 08:02	13982-63-3	
Radium-228	EPA 9320	**0.539 ± 0.449 (0.900) C:79% T:72%**	pCi/L	01/09/19 16:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.745 (1.37)**	pCi/L	01/10/19 14:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: BRGWC-27I **Lab ID: 2613020005** Collected: 12/20/18 10:08 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.527 ± 0.300 (0.436) C:84% T:NA**	pCi/L	01/04/19 07:59	13982-63-3	
Radium-228	EPA 9320	**-0.301 ± 0.256 (0.670) C:76% T:83%**	pCi/L	01/09/19 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.527 ± 0.556 (1.11)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: RB-2 **Lab ID: 2613020006** Collected: 12/20/18 10:00 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.329 ± 0.240 (0.383) C:85% T:NA**	pCi/L	01/04/19 07:59	13982-63-3	
Radium-228	EPA 9320	**0.0631 ± 0.269 (0.614) C:79% T:89%**	pCi/L	01/09/19 11:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.392 ± 0.509 (0.997)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: FB-2 **Lab ID: 2613020007** Collected: 12/20/18 10:05 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.413 ± 0.247 (0.338) C:92% T:NA**	pCi/L	01/04/19 07:59	13982-63-3	
Radium-228	EPA 9320	**0.394 ± 0.333 (0.661) C:76% T:79%**	pCi/L	01/09/19 11:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.807 ± 0.580 (0.999)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: FB-3 **Lab ID: 2613020008** Collected: 12/20/18 10:20 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.345 ± 0.301 (0.574) C:86% T:NA**	pCi/L	01/04/19 07:59	13982-63-3	
Radium-228	EPA 9320	**-0.181 ± 0.242 (0.624) C:78% T:80%**	pCi/L	01/09/19 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.345 ± 0.543 (1.20)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: BRGWC-45 **Lab ID: 2613020009** Collected: 12/20/18 10:30 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.597 ± 0.346 (0.562) C:92% T:NA**	pCi/L	01/04/19 07:59	13982-63-3	
Radium-228	EPA 9320	**0.0603 ± 0.258 (0.590) C:79% T:88%**	pCi/L	01/09/19 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.657 ± 0.604 (1.15)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Sample: BRGWC-52 **Lab ID: 2613020010** Collected: 12/20/18 11:40 Received: 12/20/18 15:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.546 ± 0.294 (0.398) C:87% T:NA**	pCi/L	01/04/19 07:58	13982-63-3	
Radium-228	EPA 9320	**0.346 ± 0.329 (0.674) C:79% T:84%**	pCi/L	01/09/19 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.892 ± 0.623 (1.07)**	pCi/L	01/10/19 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

QC Batch: 325722 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613020005, 2613020006, 2613020007, 2613020008, 2613020009, 2613020010

METHOD BLANK: 1586929 Matrix: Water
Associated Lab Samples: 2613020005, 2613020006, 2613020007, 2613020008, 2613020009, 2613020010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.375 ± 0.133 (0.173) C:96% T:NA	pCi/L	01/03/19 17:51	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

QC Batch: 325844 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613020005, 2613020006, 2613020007, 2613020008, 2613020009, 2613020010

METHOD BLANK: 1587227 Matrix: Water
Associated Lab Samples: 2613020005, 2613020006, 2613020007, 2613020008, 2613020009, 2613020010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.115 ± 0.354 (0.849) C:75% T:77%	pCi/L	01/09/19 11:24	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

QC Batch: 325473 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613020001, 2613020002, 2613020003, 2613020004

METHOD BLANK: 1585945 Matrix: Water
Associated Lab Samples: 2613020001, 2613020002, 2613020003, 2613020004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.182 ± 0.183 (0.344) C:96% T:NA	pCi/L	01/08/19 07:59	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

QC Batch: 325221 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613020001, 2613020002, 2613020003, 2613020004

METHOD BLANK: 1585109 Matrix: Water
Associated Lab Samples: 2613020001, 2613020002, 2613020003, 2613020004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	1.01 ± 0.429 (0.706) C:80% T:89%	pCi/L	01/09/19 13:00	

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2613020

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613020001	**BRGWC-50**	EPA 9315	325473		
2613020002	**BRGWC-32S**	EPA 9315	325473		
2613020003	**BRGWC-47**	EPA 9315	325473		
2613020004	**Dup-3**	EPA 9315	325473		
2613020005	**BRGWC-27I**	EPA 9315	325722		
2613020006	**RB-2**	EPA 9315	325722		
2613020007	**FB-2**	EPA 9315	325722		
2613020008	**FB-3**	EPA 9315	325722		
2613020009	**BRGWC-45**	EPA 9315	325722		
2613020010	**BRGWC-52**	EPA 9315	325722		
2613020001	**BRGWC-50**	EPA 9320	325221		
2613020002	**BRGWC-32S**	EPA 9320	325221		
2613020003	**BRGWC-47**	EPA 9320	325221		
2613020004	**Dup-3**	EPA 9320	325221		
2613020005	**BRGWC-27I**	EPA 9320	325844		
2613020006	**RB-2**	EPA 9320	325844		
2613020007	**FB-2**	EPA 9320	325844		
2613020008	**FB-3**	EPA 9320	325844		
2613020009	**BRGWC-45**	EPA 9320	325844		
2613020010	**BRGWC-52**	EPA 9320	325844		
2613020001	**BRGWC-50**	Total Radium Calculation	326482		
2613020002	**BRGWC-32S**	Total Radium Calculation	326482		
2613020003	**BRGWC-47**	Total Radium Calculation	326482		
2613020004	**Dup-3**	Total Radium Calculation	326482		
2613020005	**BRGWC-27I**	Total Radium Calculation	326482		
2613020006	**RB-2**	Total Radium Calculation	326482		
2613020007	**FB-2**	Total Radium Calculation	326482		
2613020008	**FB-3**	Total Radium Calculation	326482		
2613020009	**BRGWC-45**	Total Radium Calculation	326482		
2613020010	**BRGWC-52**	Total Radium Calculation	326482		

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 31085 Atlanta, GA 30303 P. 404-506-7239

REPORT TO: Joju Abraham | CC: Maria Padilla

REQUESTED COMPLETION DATE: — | PO #: Jabraha@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: State CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS			Metals App 3 & 4 (EPA 6020 / 7470)	TDS, Cl, F, SO4 (EPA 300.0 + SM2540C)	Radium 226 & 228 (SW-846 9315 / 9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:				P	P	P							
					PRESERVATION:				3	7	3							
12-19-18	1045	GW		X	BRGWC-50	4			1	1	2							
12-19-18	1215	GW		X	BRGWC-32S	4			1	1	2							
12-19-18	1430	GW		X	BRGWC-47	4			1	1	2							
12-20-18	—	GW		X	Dup-3	4			1	1	2							
12-20-18	1008	GW		X	BRGWC-27I	6			1	1	4							+2 Radium
12-20-18	1000	W		X	RB-2	4			1	1	2							
12-20-18	1005	W		X	FB-2	4			1	1	2							
12-20-18	1020	W		X	FB-3	4			1	1	2							
12-20-18	1030	GW		X	BRGWC-45	4			1	1	2							
12-20-18	1140	GW		X	BRGWC-52	4			1	1	2							

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

WO#: 2613020

2613020

SAMPLED BY AND TITLE: Travis Martinez & Karen Minkus | DATE/TIME: 12-20-18 / 1330
RELINQUISHED BY: [signature] | DATE/TIME: 12-20-18 / 1540
RECEIVED BY: | DATE/TIME:
RELINQUISHED BY: | DATE/TIME:
RECEIVED BY LAB: [signature] | DATE/TIME: 12/20/18 1540

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS

Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

pH checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: Min: 0.2 Max:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Rev. 12/15/2016

Pace Analytical

Sample Condition Upon Receipt

Client Name: GA Power   Project #

WO#: 2613020
PM: BM   Due Date: 01/21/19
CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other
Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83   **Type of Ice:** (Wet) Blue None   ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2   **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 12/20/18 MR

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑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-ALL-C-003rev.3, 11September2006

LABORATORY ANALYTICAL DATA

January 2019

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

January 24, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2613846

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on January 17, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2613846

Atlanta Certification IDs

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2613846

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613846001	**BRGWC-50**	Water	01/16/19 16:10	01/17/19 10:20

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2613846

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2613846001	**BRGWC-50**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2613846

Sample: BRGWC-50 **Lab ID: 2613846001** Collected: 01/16/19 16:10 Received: 01/17/19 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	01/21/19 12:25	01/22/19 16:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	01/21/19 12:25	01/22/19 16:39	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	01/21/19 12:25	01/22/19 16:39	7440-39-3	
Beryllium	**0.0038**	mg/L	0.0030	0.000050	1	01/21/19 12:25	01/22/19 16:39	7440-41-7	
Boron	**0.37**	mg/L	0.040	0.0039	1	01/21/19 12:25	01/22/19 16:39	7440-42-8	
Cadmium	**0.028**	mg/L	0.0010	0.000093	1	01/21/19 12:25	01/22/19 16:39	7440-43-9	
Calcium	**248**	mg/L	25.0	0.69	50	01/21/19 12:25	01/22/19 16:44	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	01/21/19 12:25	01/22/19 16:39	7440-47-3	
Cobalt	**1.4**	mg/L	0.50	0.026	50	01/21/19 12:25	01/22/19 16:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	01/21/19 12:25	01/22/19 16:39	7439-92-1	
Lithium	**0.042J**	mg/L	0.050	0.00097	1	01/21/19 12:25	01/22/19 16:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	01/21/19 12:25	01/22/19 16:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	01/21/19 12:25	01/22/19 16:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	01/21/19 12:25	01/22/19 16:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	01/18/19 12:10	01/23/19 14:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2270**	mg/L	25.0	10.0	1		01/18/19 13:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.1**	mg/L	0.25	0.024	1		01/21/19 20:53	16887-00-6	M1
Fluoride	**1.1**	mg/L	0.30	0.029	1		01/21/19 20:53	16984-48-8	
Sulfate	**589**	mg/L	1.0	0.017	1		01/21/19 20:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613846

QC Batch: 20870 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2613846001

METHOD BLANK: 93839 Matrix: Water
Associated Lab Samples: 2613846001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	01/23/19 14:26	

LABORATORY CONTROL SAMPLE: 93840

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: 93841 93842

Parameter	Units	2613882001 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	0.0024	0.0025	95	99	75-125	3	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613846

QC Batch: 20955
QC Batch Method: EPA 3005A
Associated Lab Samples: 2613846001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 94322 Matrix: Water
Associated Lab Samples: 2613846001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	01/22/19 16:27	
Arsenic	mg/L	ND	0.0050	0.00057	01/22/19 16:27	
Barium	mg/L	ND	0.010	0.00078	01/22/19 16:27	
Beryllium	mg/L	ND	0.0030	0.000050	01/22/19 16:27	
Boron	mg/L	ND	0.040	0.0039	01/22/19 16:27	
Cadmium	mg/L	ND	0.0010	0.000093	01/22/19 16:27	
Calcium	mg/L	ND	0.50	0.014	01/22/19 16:27	
Chromium	mg/L	ND	0.010	0.0016	01/22/19 16:27	
Cobalt	mg/L	ND	0.010	0.00052	01/22/19 16:27	
Lead	mg/L	ND	0.0050	0.00027	01/22/19 16:27	
Lithium	mg/L	ND	0.050	0.00097	01/22/19 16:27	
Molybdenum	mg/L	ND	0.010	0.0019	01/22/19 16:27	
Selenium	mg/L	ND	0.010	0.0014	01/22/19 16:27	
Thallium	mg/L	ND	0.0010	0.00014	01/22/19 16:27	

LABORATORY CONTROL SAMPLE: 94323

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	0.098	98	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 94324 94325

Parameter	Units	2613928011 Result	MS Spike Conc.	MSD 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	0.10	100	101	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613846

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 94324 94325

Parameter	Units	2613928011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0023J	0.1	0.1	0.10	0.10	98	97	75-125	1	20	
Barium	mg/L	0.054	0.1	0.1	0.15	0.15	96	97	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20	
Boron	mg/L	0.91	1	1	1.9	1.9	98	94	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	99	75-125	1	20	
Calcium	mg/L	46.5	1	1	47.2	45.5	72	-104	75-125	4	20	M6
Chromium	mg/L	0.0021J	0.1	0.1	0.11	0.11	103	104	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20	
Molybdenum	mg/L	0.087	0.1	0.1	0.19	0.19	104	105	75-125	1	20	
Selenium	mg/L	0.0018J	0.1	0.1	0.10	0.10	101	103	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613846

QC Batch: 20852
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2613846001

LABORATORY CONTROL SAMPLE: 93755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	396	99	84-108	

SAMPLE DUPLICATE: 93756

Parameter	Units	2613841002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	118	122	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613846

QC Batch: 20943
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2613846001

METHOD BLANK: 94292 Matrix: Water
Associated Lab Samples: 2613846001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.13J	0.25	0.024	01/21/19 20:11	
Fluoride	mg/L	ND	0.30	0.029	01/21/19 20:11	
Sulfate	mg/L	ND	1.0	0.017	01/21/19 20:11	

LABORATORY CONTROL SAMPLE: 94293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.5	95	90-110	
Fluoride	mg/L	10	9.0	90	90-110	
Sulfate	mg/L	10	9.6	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 94294 94295

Parameter	Units	2613846001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.1	10	10	30.6	30.7	65	66	90-110	0	15	M1
Fluoride	mg/L	1.1	10	10	10.7	10.8	95	96	90-110	1	15	
Sulfate	mg/L	1510	10	10	558	558	-312	-312	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 94296

Parameter	Units	2613849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	8.6	10	15.2	66	90-110	M1
Fluoride	mg/L	ND	10	9.3	93	90-110	
Sulfate	mg/L	209	10	160	-488	90-110	E,M1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 2613846

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2613846

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613846001	**BRGWC-50**	EPA 3005A	20955	EPA 6020B	20975
2613846001	**BRGWC-50**	EPA 7470A	20870	EPA 7470A	20890
2613846001	**BRGWC-50**	SM 2540C	20852		
2613846001	**BRGWC-50**	EPA 300.0	20943		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: 3-5 day
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)								
CONTAINER TYPE:								P	P	P								
PRESERVATION								3&7	7	3&7								
01/16/19	1610	GW		x	BRGWC-50	4		X	X	X								

LAB ID NUMBER

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 2613846

2613846

SAMPLED BY AND TITLE: Golder
DATE/TIME:
RELINQUISHED BY:
DATE/TIME: 1-17-19/0819

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Elaine Cook
DATE/TIME: 1/17/19
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.3 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered Into LIMS:
Tracking #:

Received by Lab:
MZalman 01/17/19, 1020

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project # _____

WO#: 2613846

PM: BM Due Date: 01/24/19

CLIENT: GAPower-CCR

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: 83 Type of Ice: Wet Blue None

Cooler Temperature: 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 1/17/19 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

February 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2613847

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on January 17, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2613847

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2613847

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613847001	**BRGWC-50**	Water	01/16/19 16:10	01/17/19 10:20

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2613847

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613847001	**BRGWC-50**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2613847

Sample: BRGWC-50 **Lab ID: 2613847001** Collected: 01/16/19 16:10 Received: 01/17/19 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.937 ± 0.352 (0.351) C:97% T:NA**	pCi/L	01/29/19 08:33	13982-63-3	
Radium-228	EPA 9320	**0.452 ± 0.383 (0.767) C:76% T:82%**	pCi/L	01/30/19 15:50	15262-20-1	
Total Radium	Total Radium Calculation	**1.39 ± 0.735 (1.12)**	pCi/L	01/31/19 11:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2613847

QC Batch: 327933 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613847001

METHOD BLANK: 1596359 Matrix: Water
Associated Lab Samples: 2613847001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.299 ± 0.204 (0.307) C:99% T:NA	pCi/L	01/29/19 08:33	

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Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2613847

QC Batch: 327932 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613847001

METHOD BLANK: 1596358 Matrix: Water
Associated Lab Samples: 2613847001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0310 ± 0.366 (0.844) C:75% T:80%	pCi/L	01/30/19 15:49	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 2613847

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2613847

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613847001	**BRGWC-50**	EPA 9315	327933		
2613847001	**BRGWC-50**	EPA 9320	327932		
2613847001	**BRGWC-50**	Total Radium Calculation	328663		

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: 3-5 day
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE							P	P	P	
PRESERVATION							3&7	7	3&7	
01/16/19	1610	GW		x	BRGWC-50	4	X	X	X	

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 2613847

2613847

SAMPLED BY AND TITLE: Golder
DATE/TIME:
RELINQUISHED BY: [signature]
DATE/TIME: 1-17-19 / 0819

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Elaine Cook
DATE/TIME: 1/17/19
Temperature: Min: 0.3 Max:
pH checked: Yes No NA
Ice: Yes No NA

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Received by Lab:
MLahman 01/17/19, 1020

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2613847

PM: BM **Due Date: 02/14/19**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.3 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/17/19 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

January 28, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2613937

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on January 18, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2613937

Atlanta Certification IDs

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2613937

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613937001	**BRGWC-52**	Water	01/17/19 12:45	01/18/19 17:50

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2613937

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2613937001	**BRGWC-52**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2613937

Sample: BRGWC-52 **Lab ID: 2613937001** Collected: 01/17/19 12:45 Received: 01/18/19 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	01/23/19 11:40	01/24/19 18:34	7440-36-0	
Arsenic	**0.0032J**	mg/L	0.0050	0.00057	1	01/23/19 11:40	01/24/19 18:34	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	01/23/19 11:40	01/24/19 18:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	01/23/19 11:40	01/24/19 18:34	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	01/23/19 11:40	01/24/19 18:34	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	01/23/19 11:40	01/24/19 18:34	7440-43-9	
Calcium	**39.4**	mg/L	25.0	0.69	50	01/23/19 11:40	01/24/19 18:39	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	01/23/19 11:40	01/24/19 18:34	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	01/23/19 11:40	01/24/19 18:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	01/23/19 11:40	01/24/19 18:34	7439-92-1	
Lithium	**0.0039J**	mg/L	0.050	0.00097	1	01/23/19 11:40	01/24/19 18:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	01/23/19 11:40	01/24/19 18:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	01/23/19 11:40	01/24/19 18:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	01/23/19 11:40	01/24/19 18:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	01/28/19 08:00	01/28/19 12:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**347**	mg/L	25.0	10.0	1		01/21/19 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.4**	mg/L	0.25	0.024	1		01/25/19 08:23	16887-00-6	
Fluoride	**0.23J**	mg/L	0.30	0.029	1		01/25/19 08:23	16984-48-8	
Sulfate	**157**	mg/L	50.0	0.85	50		01/25/19 15:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613937

QC Batch: 21236 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2613937001

METHOD BLANK: 95506 Matrix: Water
Associated Lab Samples: 2613937001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	01/28/19 11:25	

LABORATORY CONTROL SAMPLE: 95507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 96026 96027

Parameter	Units	2613935006 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	0.0023	91	94	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613937

QC Batch: 21099
QC Batch Method: EPA 3005A
Associated Lab Samples: 2613937001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 94783 Matrix: Water
Associated Lab Samples: 2613937001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	01/24/19 15:45	
Arsenic	mg/L	ND	0.0050	0.00057	01/24/19 15:45	
Barium	mg/L	ND	0.010	0.00078	01/24/19 15:45	
Beryllium	mg/L	ND	0.0030	0.000050	01/24/19 15:45	
Boron	mg/L	ND	0.040	0.0039	01/24/19 15:45	
Cadmium	mg/L	ND	0.0010	0.000093	01/24/19 15:45	
Calcium	mg/L	ND	0.50	0.014	01/24/19 15:45	
Chromium	mg/L	ND	0.010	0.0016	01/24/19 15:45	
Cobalt	mg/L	ND	0.010	0.00052	01/24/19 15:45	
Lead	mg/L	ND	0.0050	0.00027	01/24/19 15:45	
Lithium	mg/L	ND	0.050	0.00097	01/24/19 15:45	
Molybdenum	mg/L	ND	0.010	0.0019	01/24/19 15:45	
Selenium	mg/L	ND	0.010	0.0014	01/24/19 15:45	
Thallium	mg/L	ND	0.0010	0.00014	01/24/19 15:45	

LABORATORY CONTROL SAMPLE: 94784

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	0.10	102	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.1	105	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	0.10	102	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 94785 94786

Parameter	Units	2613935008 Result	MS Spike Conc.	MSD 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	0.10	101	101	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613937

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 94785 94786

Parameter	Units	2613935008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Barium	mg/L	0.035	0.1	0.1	0.13	0.13	98	96	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.097	0.099	97	99	75-125	2	20	
Boron	mg/L	1.8	1	1	3.2	3.1	139	136	75-125	1	20	M1
Cadmium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Calcium	mg/L	80.3	1	1	86.9	81.5	654	112	75-125	6	20	M6
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.099	97	99	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.093	94	93	75-125	1	20	
Lithium	mg/L	0.015J	0.1	0.1	0.11	0.12	98	102	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.096	96	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613937

QC Batch: 20919 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2613937001

LABORATORY CONTROL SAMPLE: 94229

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	390	98	84-108	

SAMPLE DUPLICATE: 94230

Parameter	Units	2613906008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	5700	5650	1	10	

SAMPLE DUPLICATE: 94231

Parameter	Units	2613928015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2613937

QC Batch: 21196 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2613937001

METHOD BLANK: 95342 — Matrix: Water
Associated Lab Samples: 2613937001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.10J	0.25	0.024	01/25/19 01:30	
Fluoride	mg/L	ND	0.30	0.029	01/25/19 01:30	
Sulfate	mg/L	ND	1.0	0.017	01/25/19 01:30	

LABORATORY CONTROL SAMPLE: 95343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	9.7	97	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 95344 95345

Parameter	Units	2613935001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.9	10	10	16.3	16.0	94	91	90-110	2	15	
Fluoride	mg/L	0.49	10	10	10.6	9.9	101	94	90-110	6	15	
Sulfate	mg/L	243	10	10	183	184	-593	-588	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 95346

Parameter	Units	2613935002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	7.2	10	16.3	91	90-110	
Fluoride	mg/L	0.18J	10	9.5	93	90-110	
Sulfate	mg/L	305	10	232	-733	90-110	E,M1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 2613937

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2613937

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613937001	**BRGWC-52**	EPA 3005A	21099	EPA 6020B	21134
2613937001	**BRGWC-52**	EPA 7470A	21236	EPA 7470A	21347
2613937001	**BRGWC-52**	SM 2540C	20919		
2613937001	**BRGWC-52**	EPA 300.0	21196		

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: 3-5 day
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB #
CONTAINER TYPE								P	P	P							
PRESERVATION								3&7	7	3&7							
01/17/19	1245	GW		x	BRGWC-52	4		X	X	X							

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 2613937

2613937

SAMPLED BY AND TITLE: Rachel Kirkman
DATE/TIME: 1-18-19 / 1750
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Rachel Kirkman
DATE/TIME: 01/18/19 1750
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 4.2 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered Into LIMS:
Tracking #:

Plant Branch COC 1.17.19_Pond BCD

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2613937

PM: BM Due Date: 01/28/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.2 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/18/19 MR

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

February 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2613938

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on January 18, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2613938

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2613938

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613938001	**BRGWC-52**	Water	01/17/19 12:45	01/18/19 17:50

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2613938

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613938001	**BRGWC-52**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2613938

Sample: BRGWC-52 **Lab ID: 2613938001** Collected: 01/17/19 12:45 Received: 01/18/19 17:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.285 ± 0.228 (0.401) C:87% T:NA**	pCi/L	01/29/19 08:18	13982-63-3	
Radium-228	EPA 9320	**0.126 ± 0.310 (0.695) C:72% T:82%**	pCi/L	01/30/19 15:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.411 ± 0.538 (1.10)**	pCi/L	01/31/19 11:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2613938

QC Batch: 327933 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613938001

METHOD BLANK: 1596359 Matrix: Water
Associated Lab Samples: 2613938001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.299 ± 0.204 (0.307) C:99% T:NA	pCi/L	01/29/19 08:33	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2613938

QC Batch: 327932 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613938001

METHOD BLANK: 1596358 Matrix: Water
Associated Lab Samples: 2613938001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0310 ± 0.366 (0.844) C:75% T:80%	pCi/L	01/30/19 15:49	

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

Pace Analytical Services, LLC
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QUALIFIERS

Project: Plant Branch
Pace Project No.: 2613938

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2613938

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613938001	**BRGWC-52**	EPA 9315	327933		
2613938001	**BRGWC-52**	EPA 9320	327932		
2613938001	**BRGWC-52**	Total Radium Calculation	328665		

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: 3-5 day
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3&7	7	3&7							
01/17/19	1245	GW		x	BRGWC-52	4		X	X	X							

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 2613938

2613938

SAMPLED BY AND TITLE: Ram Mukpa
DATE/TIME: 1-18-19 / 1750
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Rkirkman
DATE/TIME: 01/18/19 1750
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

FOR LAB USE ONLY
LAB #:
Entered Into LIMS:
Tracking #:

Ice: Yes No NA
Temperature: Min: 4.2 Max:
Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 2613938

PM: BM **Due Date: 02/18/19**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.2 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 1/18/19 MR

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

LABORATORY ANALYTICAL DATA

February 2019

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

February 21, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2614928

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on February 13, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2614928

Atlanta Certification IDs

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2614928

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2614928001	**BRGWC-52**	Water	02/13/19 14:35	02/13/19 17:44
2614928002	**EB**	Water	02/13/19 14:30	02/13/19 17:44
2614928003	**FB**	Water	02/13/19 14:20	02/13/19 17:44
2614928004	**FD**	Water	02/13/19 00:00	02/13/19 17:44

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2614928

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2614928001	**BRGWC-52**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2614928002	**EB**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2614928003	**FB**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2614928004	**FD**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	RLC	1
		EPA 300.0	MWB	3

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ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2614928

Sample: BRGWC-52 **Lab ID: 2614928001** Collected: 02/13/19 14:35 Received: 02/13/19 17:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 17:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 17:30	7440-38-2	
Barium	**0.025**	mg/L	0.010	1	02/18/19 10:23	02/18/19 17:30	7440-39-3	
Beryllium	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 17:30	7440-41-7	
Boron	**1.7**	mg/L	0.040	1	02/18/19 10:23	02/18/19 17:30	7440-42-8	
Cadmium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 17:30	7440-43-9	
Calcium	**36.9**	mg/L	25.0	50	02/18/19 10:23	02/18/19 17:36	7440-70-2	M6
Chromium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 17:30	7440-47-3	
Cobalt	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 17:30	7440-48-4	
Lead	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 17:30	7439-92-1	
Lithium	ND	mg/L	0.050	1	02/18/19 10:23	02/18/19 17:30	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 17:30	7439-98-7	
Selenium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 17:30	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 17:30	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	1	02/15/19 12:20	02/15/19 16:12	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**350**	mg/L	25.0	1		02/20/19 16:25		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**6.5**	mg/L	0.25	1		02/15/19 16:55	16887-00-6	
Fluoride	ND	mg/L	0.30	1		02/15/19 16:55	16984-48-8	
Sulfate	**169**	mg/L	20.0	20		02/20/19 20:11	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2614928

Sample: EB **Lab ID: 2614928002** Collected: 02/13/19 14:30 Received: 02/13/19 17:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 18:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 18:22	7440-38-2	
Barium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 18:22	7440-41-7	
Boron	ND	mg/L	0.040	1	02/18/19 10:23	02/18/19 18:22	7440-42-8	
Cadmium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 18:22	7440-43-9	
Calcium	ND	mg/L	0.50	1	02/18/19 10:23	02/18/19 18:22	7440-70-2	
Chromium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:22	7440-47-3	
Cobalt	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:22	7440-48-4	
Lead	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 18:22	7439-92-1	
Lithium	ND	mg/L	0.050	1	02/18/19 10:23	02/18/19 18:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:22	7439-98-7	
Selenium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:22	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 18:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	1	02/15/19 12:20	02/15/19 16:24	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	ND	mg/L	25.0	1		02/20/19 16:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	ND	mg/L	0.25	1		02/15/19 18:04	16887-00-6	
Fluoride	ND	mg/L	0.30	1		02/15/19 18:04	16984-48-8	
Sulfate	ND	mg/L	1.0	1		02/15/19 18:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2614928

Sample: FB **Lab ID: 2614928003** Collected: 02/13/19 14:20 Received: 02/13/19 17:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 18:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 18:28	7440-38-2	
Barium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 18:28	7440-41-7	
Boron	ND	mg/L	0.040	1	02/18/19 10:23	02/18/19 18:28	7440-42-8	
Cadmium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 18:28	7440-43-9	
Calcium	ND	mg/L	0.50	1	02/18/19 10:23	02/18/19 18:28	7440-70-2	
Chromium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:28	7440-47-3	
Cobalt	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:28	7440-48-4	
Lead	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 18:28	7439-92-1	
Lithium	ND	mg/L	0.050	1	02/18/19 10:23	02/18/19 18:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:28	7439-98-7	
Selenium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:28	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 18:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	1	02/15/19 12:20	02/15/19 16:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	ND	mg/L	25.0	1		02/20/19 16:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	ND	mg/L	0.25	1		02/15/19 18:51	16887-00-6	
Fluoride	ND	mg/L	0.30	1		02/15/19 18:51	16984-48-8	
Sulfate	ND	mg/L	1.0	1		02/15/19 18:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch
Pace Project No.: 2614928

Sample: FD **Lab ID: 2614928004** Collected: 02/13/19 00:00 Received: 02/13/19 17:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 18:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 18:33	7440-38-2	
Barium	**0.025**	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	1	02/18/19 10:23	02/18/19 18:33	7440-41-7	
Boron	**1.7**	mg/L	0.040	1	02/18/19 10:23	02/18/19 18:33	7440-42-8	
Cadmium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 18:33	7440-43-9	
Calcium	**38.6**	mg/L	25.0	50	02/18/19 10:23	02/18/19 18:39	7440-70-2	
Chromium	**0.029**	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:33	7440-47-3	
Cobalt	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:33	7440-48-4	
Lead	ND	mg/L	0.0050	1	02/18/19 10:23	02/18/19 18:33	7439-92-1	
Lithium	ND	mg/L	0.050	1	02/18/19 10:23	02/18/19 18:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:33	7439-98-7	
Selenium	ND	mg/L	0.010	1	02/18/19 10:23	02/18/19 18:33	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/18/19 10:23	02/18/19 18:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	1	02/15/19 12:20	02/15/19 16:36	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**344**	mg/L	25.0	1		02/20/19 16:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**6.4**	mg/L	0.25	1		02/15/19 19:14	16887-00-6	
Fluoride	**0.99**	mg/L	0.30	1		02/15/19 19:14	16984-48-8	
Sulfate	**165**	mg/L	20.0	20		02/20/19 20:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2614928

QC Batch: 22538 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

METHOD BLANK: 101420 Matrix: Water
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	02/15/19 16:07	

LABORATORY CONTROL SAMPLE: 101421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101635 101636

Parameter	Units	2614928001 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	0.0021	0.0021	82	85	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2614928

QC Batch: 22632 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

METHOD BLANK: 101912 Matrix: Water
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	02/18/19 17:19	
Arsenic	mg/L	ND	0.0050	02/18/19 17:19	
Barium	mg/L	ND	0.010	02/18/19 17:19	
Beryllium	mg/L	ND	0.0030	02/18/19 17:19	
Boron	mg/L	ND	0.040	02/18/19 17:19	
Cadmium	mg/L	ND	0.0010	02/18/19 17:19	
Calcium	mg/L	ND	0.50	02/18/19 17:19	
Chromium	mg/L	ND	0.010	02/18/19 17:19	
Cobalt	mg/L	ND	0.010	02/18/19 17:19	
Lead	mg/L	ND	0.0050	02/18/19 17:19	
Lithium	mg/L	ND	0.050	02/18/19 17:19	
Molybdenum	mg/L	ND	0.010	02/18/19 17:19	
Selenium	mg/L	ND	0.010	02/18/19 17:19	
Thallium	mg/L	ND	0.0010	02/18/19 17:19	

LABORATORY CONTROL SAMPLE: 101913

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	102	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101914 101915

Parameter	Units	2614928001 Result	MS Spike Conc.	MSD 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	0.10	102	103	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2614928

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101914 101915

Parameter	Units	2614928001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20	
Barium	mg/L	0.025	0.1	0.1	0.12	0.12	98	99	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.097	0.092	97	92	75-125	5	20	
Boron	mg/L	1.7	1	1	2.6	2.6	87	83	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	0	20	
Calcium	mg/L	36.9	1	1	35.9	39.5	-95	267	75-125	10	20	M6
Chromium	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	2	20	
Cobalt	mg/L	ND	0.1	0.1	0.096	0.098	95	97	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.097	96	97	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.099	96	92	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	100	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.096	96	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2614928

QC Batch: 22749 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

LABORATORY CONTROL SAMPLE: 102263

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 102264

Parameter	Units	2614928001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	350	360	3	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch
Pace Project No.: 2614928

QC Batch: 22503 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

METHOD BLANK: 101222 Matrix: Water
Associated Lab Samples: 2614928001, 2614928002, 2614928003, 2614928004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	02/15/19 14:59	
Fluoride	mg/L	ND	0.30	02/15/19 14:59	
Sulfate	mg/L	ND	1.0	02/15/19 14:59	

LABORATORY CONTROL SAMPLE: 101223

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.8	98	90-110	
Fluoride	mg/L	10	10.6	106	90-110	
Sulfate	mg/L	10	9.1	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101236 101237

Parameter	Units	2614928001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.5	10	10	15.5	15.6	90	91	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.8	10.2	108	102	90-110	6	15	
Sulfate	mg/L	169	10	10	154	154	-154	-154	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 101238

Parameter	Units	2614928002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	ND	10	9.6	96	90-110	
Fluoride	mg/L	ND	10	9.7	97	90-110	
Sulfate	mg/L	ND	10	9.3	93	90-110	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch
Pace Project No.: 2614928

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2614928

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2614928001	**BRGWC-52**	EPA 3005A	22632	EPA 6020B	22691
2614928002	**EB**	EPA 3005A	22632	EPA 6020B	22691
2614928003	**FB**	EPA 3005A	22632	EPA 6020B	22691
2614928004	**FD**	EPA 3005A	22632	EPA 6020B	22691
2614928001	**BRGWC-52**	EPA 7470A	22538	EPA 7470A	22585
2614928002	**EB**	EPA 7470A	22538	EPA 7470A	22585
2614928003	**FB**	EPA 7470A	22538	EPA 7470A	22585
2614928004	**FD**	EPA 7470A	22538	EPA 7470A	22585
2614928001	**BRGWC-52**	SM 2540C	22749		
2614928002	**EB**	SM 2540C	22749		
2614928003	**FB**	SM 2540C	22749		
2614928004	**FD**	SM 2540C	22749		
2614928001	**BRGWC-52**	EPA 300.0	22503		
2614928002	**EB**	EPA 300.0	22503		
2614928003	**FB**	EPA 300.0	22503		
2614928004	**FD**	EPA 300.0	22503		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Maner Road	Copy To:	Pam Pfeil	Company Name:	
Atlanta, GA 30339				Address:	
Email:	jabraham@southernco.com	Purchase Order #:		Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Branch	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:		Pace Profile #:	326.1.2

Regulatory Agency	
State / Location	GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): Radium 226/228	CCR Metals by 6020/7470	TDS, Chloride, Fluoride, Sulf	Residual Chlorine (Y/N)	
1	BRGWC-52	W		2-13-19		1435			6	X		X							X	X	X		Extra Rad 1
2	EB	W				1430			4	X		X							X	X	X		2
3	FB	W				1420			4	X		X							X	X	X		3
4	FD	W				—			4	X		X							X	X	X		4
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	/ Golder	2-13-19	1744		2/13/19	1744	6.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karim Minkara

SIGNATURE of SAMPLER: DATE Signed: 2-13-19

WO# : 2614928

2614928

Pace Analytical

Sample Condition Upon Receipt

WO#: 2614928
PM: BM Due Date: 02/21/19
CLIENT: GAPower-CCR

Client Name: Georgia Power

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used 032 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 6.8°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 2/13/19 JJ

Temp should be above freezing to 6°C

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 08, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch
Pace Project No.: 2614929

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on February 13, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Branch
Pace Project No.: 2614929

Pennsylvania Certification IDs

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
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Branch
Pace Project No.: 2614929

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2614929001	**BRGWC-52**	Water	02/13/19 14:35	02/13/19 17:44
2614929002	**EB**	Water	02/13/19 14:30	02/13/19 17:44
2614929003	**FB**	Water	02/13/19 14:20	02/13/19 17:44
2614929004	**FD**	Water	02/13/19 00:00	02/13/19 17:44

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SAMPLE ANALYTE COUNT

Project: Plant Branch
Pace Project No.: 2614929

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2614929001	**BRGWC-52**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2614929002	**EB**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2614929003	**FB**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2614929004	**FD**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2614929

Sample: BRGWC-52 **Lab ID: 2614929001** Collected: 02/13/19 14:35 Received: 02/13/19 17:44 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.724 ± 0.307 (0.322) C:90% T:NA**	pCi/L	02/22/19 07:54	13982-63-3	
Radium-228	EPA 9320	**0.960 ± 0.468 (0.807) C:78% T:80%**	pCi/L	02/27/19 15:55	15262-20-1	
Total Radium	Total Radium Calculation	**1.68 ± 0.775 (1.13)**	pCi/L	03/01/19 13:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2614929

Sample: EB **Lab ID: 2614929002** Collected: 02/13/19 14:30 Received: 02/13/19 17:44 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 ± 0.339 (0.618) C:82% T:NA**	pCi/L	02/22/19 07:55	13982-63-3	
Radium-228	EPA 9320	**0.358 ± 0.530 (1.14) C:78% T:70%**	pCi/L	02/27/19 17:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.844 ± 0.869 (1.76)**	pCi/L	03/01/19 13:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2614929

Sample: FB **Lab ID: 2614929003** Collected: 02/13/19 14:20 Received: 02/13/19 17:44 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.283 ± 0.234 (0.420) C:86% T:NA**	pCi/L	02/22/19 07:55	13982-63-3	
Radium-228	EPA 9320	**-0.234 ± 0.437 (1.07) C:76% T:77%**	pCi/L	02/27/19 17:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.283 ± 0.671 (1.49)**	pCi/L	03/01/19 13:01	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2614929

Sample: FD **Lab ID: 2614929004** Collected: 02/13/19 00:00 Received: 02/13/19 17:44 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.556 ± 0.305 (0.470) C:86% T:NA**	pCi/L	02/22/19 07:55	13982-63-3	
Radium-228	EPA 9320	**1.15 ± 0.555 (0.949) C:77% T:88%**	pCi/L	02/27/19 18:16	15262-20-1	
Total Radium	Total Radium Calculation	**1.71 ± 0.860 (1.42)**	pCi/L	03/01/19 13:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2614929

QC Batch: 330802 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2614929001, 2614929002, 2614929003, 2614929004

METHOD BLANK: 1609543 Matrix: Water
Associated Lab Samples: 2614929001, 2614929002, 2614929003, 2614929004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.239 ± 0.192 (0.321) C:86% T:NA	pCi/L	02/22/19 09:18	

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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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Branch
Pace Project No.: 2614929

QC Batch: 331020 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2614929001, 2614929002, 2614929003, 2614929004

METHOD BLANK: 1610552 Matrix: Water
Associated Lab Samples: 2614929001, 2614929002, 2614929003, 2614929004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.268 ± 0.303 (0.630) C:76% T:84%	pCi/L	02/27/19 16:02	

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
Pace Project No.: 2614929

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch
Pace Project No.: 2614929

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2614929001	**BRGWC-52**	EPA 9315	330802		
2614929002	**EB**	EPA 9315	330802		
2614929003	**FB**	EPA 9315	330802		
2614929004	**FD**	EPA 9315	330802		
2614929001	**BRGWC-52**	EPA 9320	331020		
2614929002	**EB**	EPA 9320	331020		
2614929003	**FB**	EPA 9320	331020		
2614929004	**FD**	EPA 9320	331020		
2614929001	**BRGWC-52**	Total Radium Calculation	331911		
2614929002	**EB**	Total Radium Calculation	331911		
2614929003	**FB**	Total Radium Calculation	331911		
2614929004	**FD**	Total Radium Calculation	331911		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Maner Road	Copy To:	Dawn Pratt	Company Name:	
Atlanta, GA 30339				Address:	
Email:	jabraham@southernco.com	Purchase Order #:		Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Branch	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:		Pace Profile #:	326.1.2

Regulatory Agency	
State / Location	GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Radium 226/228	CCR Metals by 6020/7470	TDS, Chloride, Fluoride, Sulf	Residual Chlorine (Y/N)	
1	BRGWC-52	W		2-13-19		1435			6	X		X							X	X	X		Extra Rad
2	EB	W				1430			4	X		X							X	X	X		
3	FB	W				1420			4	X		X							X	X	X		
4	FD	W				—			4	X		X							X	X	X		
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

1
2
3
4

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	/ Golder	2-13-19	1744		2/13/19	1744	6.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karim Minkara

SIGNATURE of SAMPLER: DATE Signed: 2-13-19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

WO#: 2614929

2614929

Page 13 of 25

Pace Analytical

Sample Condition Upon Recei

WO#: 2614929

PM: BM Due Date: 03/14/19

CLIENT: GAPower-CCR

Client Name: Georgia Power

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used 032 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 6.8°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 2/13/19

Temp should be above freezing to 6°C

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

LABORATORY ANALYTICAL DATA

March 2019

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 04, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory between March 20, 2019 and March 21, 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.

This revised report replaces the original reports for 2616369 issued on 3/26/2019 and 2616405 issued on 3/31/2019 to combine Branch BCD samples collected 3/19 and 3/20 per consultant request. No other changes have been made to this 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Eric Rolle, Georgia Power - Coal Combustion Residuals
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Atlanta Certification IDs

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

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616369001	**BRGWA-12S**	Water	03/19/19 12:25	03/20/19 17:00
2616369002	**BRGWA-12I**	Water	03/19/19 14:35	03/20/19 17:00
2616369003	**BRGWC-27I**	Water	03/19/19 16:55	03/20/19 17:00
2616369004	**BRGWA-23S**	Water	03/19/19 15:30	03/20/19 17:00
2616369005	**BRGWC-47**	Water	03/19/19 16:40	03/20/19 17:00
2616369006	**EB-1**	Water	03/19/19 17:05	03/20/19 17:00
2616405001	**BRGWC-25I**	Water	03/20/19 16:50	03/21/19 10:35
2616405002	**BRGWC-29I**	Water	03/20/19 15:25	03/21/19 10:35
2616405003	**BRGWC-30I**	Water	03/20/19 13:05	03/21/19 10:35
2616405004	**BRGWC-32S**	Water	03/20/19 14:05	03/21/19 10:35
2616405005	**BRGWC-45**	Water	03/20/19 12:40	03/21/19 10:35
2616405006	**BRGWC-50**	Water	03/20/19 13:35	03/21/19 10:35
2616405007	**BRGWC-52I**	Water	03/20/19 10:20	03/21/19 10:35
2616405008	**Dup-2**	Water	03/20/19 00:00	03/21/19 10:35
2616405009	**Dup-3**	Water	03/20/19 00:00	03/21/19 10:35
2616405010	**FB-3**	Water	03/20/19 17:15	03/21/19 10:35
2616405011	**EB-2**	Water	03/20/19 13:30	03/21/19 10:35
2616405012	**EB-3**	Water	03/20/19 13:00	03/21/19 10:35

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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616369001	BRGWA-12S	EPA 6020B	KLH	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616369002	BRGWA-12I	EPA 6020B	KLH	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616369003	BRGWC-27I	EPA 6020B	KLH	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616369004	BRGWA-23S	EPA 6020B	KLH	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616369005	BRGWC-47	EPA 6020B	KLH	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616369006	EB-1	EPA 6020B	KLH	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616405001	BRGWC-25I	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405002	BRGWC-29I	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405003	BRGWC-30I	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405004	BRGWC-32S	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405005	BRGWC-45	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405006	BRGWC-50	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405007	BRGWC-52I	EPA 6020B	CSW	2

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405008	**Dup-2**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405009	**Dup-3**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405010	**FB-3**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405011	**EB-2**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616405012	**EB-3**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWA-12S **Lab ID: 2616369001** Collected: 03/19/19 12:25 Received: 03/20/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/21/19 14:00	03/22/19 21:51	7440-42-8	
Calcium	**5.9**	mg/L	0.50	0.014	1	03/21/19 14:00	03/22/19 21:51	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**82.0**	mg/L	25.0	10.0	1		03/22/19 12:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.5**	mg/L	0.25	0.024	1		03/24/19 23:15	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/24/19 23:15	16984-48-8	
Sulfate	**0.75J**	mg/L	1.0	0.017	1		03/24/19 23:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWA-12I **Lab ID: 2616369002** Collected: 03/19/19 14:35 Received: 03/20/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.0080J**	mg/L	0.040	0.0039	1	03/21/19 14:00	03/22/19 22:02	7440-42-8	
Calcium	**15.9J**	mg/L	25.0	0.69	50	03/21/19 14:00	03/22/19 22:08	7440-70-2	D3
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**132**	mg/L	25.0	10.0	1		03/22/19 12:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.2**	mg/L	0.25	0.024	1		03/24/19 23:38	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/24/19 23:38	16984-48-8	
Sulfate	**2.2**	mg/L	1.0	0.017	1		03/24/19 23:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-27I **Lab ID: 2616369003** Collected: 03/19/19 16:55 Received: 03/20/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.1**	mg/L	0.040	0.0039	1	03/21/19 14:00	03/22/19 22:25	7440-42-8	
Calcium	**60.2**	mg/L	25.0	0.69	50	03/21/19 14:00	03/22/19 22:31	7440-70-2	M6
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**334**	mg/L	25.0	10.0	1		03/22/19 12:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		03/25/19 01:31	16887-00-6	
Fluoride	**0.20J**	mg/L	0.30	0.029	1		03/25/19 01:31	16984-48-8	
Sulfate	**199**	mg/L	10.0	0.17	10		03/26/19 09:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWA-23S **Lab ID: 2616369004** Collected: 03/19/19 15:30 Received: 03/20/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.068**	mg/L	0.040	0.0039	1	03/21/19 14:00	03/22/19 23:05	7440-42-8	
Calcium	**13.5J**	mg/L	25.0	0.69	50	03/21/19 14:00	03/22/19 23:11	7440-70-2	D3
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**161**	mg/L	25.0	10.0	1		03/22/19 12:56		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.8**	mg/L	0.25	0.024	1		03/25/19 01:53	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/25/19 01:53	16984-48-8	
Sulfate	**65.0**	mg/L	10.0	0.17	10		03/26/19 10:11	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-47 **Lab ID: 2616369005** Collected: 03/19/19 16:40 Received: 03/20/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.41**	mg/L	0.040	0.0039	1	03/21/19 14:00	03/22/19 23:28	7440-42-8	
Calcium	**335**	mg/L	25.0	0.69	50	03/21/19 14:00	03/22/19 23:34	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2050**	mg/L	25.0	10.0	1		03/22/19 12:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.7**	mg/L	0.25	0.024	1		03/25/19 02:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/25/19 02:16	16984-48-8	
Sulfate	**1100**	mg/L	100	1.7	100		03/26/19 10:34	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: EB-1 **Lab ID: 2616369006** Collected: 03/19/19 17:05 Received: 03/20/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/21/19 14:00	03/22/19 23:40	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	03/21/19 14:00	03/22/19 23:40	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**12.0J**	mg/L	25.0	10.0	1		03/22/19 12:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.067J**	mg/L	0.25	0.024	1		03/25/19 02:39	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/25/19 02:39	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/25/19 02:39	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-25I **Lab ID: 2616405001** Collected: 03/20/19 16:50 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.5**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 18:14	7440-42-8	
Calcium	**54.2**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 18:19	7440-70-2	M6
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**412**	mg/L	25.0	10.0	1		03/22/19 13:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.4**	mg/L	0.25	0.024	1		03/26/19 06:28	16887-00-6	
Fluoride	**0.18J**	mg/L	0.30	0.029	1		03/26/19 06:28	16984-48-8	
Sulfate	**240**	mg/L	10.0	0.17	10		03/27/19 21:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-29I **Lab ID: 2616405002** Collected: 03/20/19 15:25 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.5**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 19:05	7440-42-8	
Calcium	**55.4**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 19:11	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**391**	mg/L	25.0	10.0	1		03/22/19 13:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	0.25	0.024	1		03/26/19 07:14	16887-00-6	
Fluoride	**0.091J**	mg/L	0.30	0.029	1		03/26/19 07:14	16984-48-8	
Sulfate	**278**	mg/L	20.0	0.34	20		03/27/19 21:28	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-30I **Lab ID: 2616405003** Collected: 03/20/19 13:05 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.7**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 19:17	7440-42-8	
Calcium	**141**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 19:22	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**885**	mg/L	25.0	10.0	1		03/22/19 13:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		03/26/19 07:37	16887-00-6	
Fluoride	**0.31**	mg/L	0.30	0.029	1		03/26/19 07:37	16984-48-8	
Sulfate	**623**	mg/L	20.0	0.34	20		03/27/19 21:51	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-32S **Lab ID: 2616405004** Collected: 03/20/19 14:05 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.4**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 19:28	7440-42-8	
Calcium	**52.8**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 19:34	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**564**	mg/L	25.0	10.0	1		03/22/19 13:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.3**	mg/L	0.25	0.024	1		03/26/19 08:00	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/26/19 08:00	16984-48-8	
Sulfate	**409**	mg/L	20.0	0.34	20		03/27/19 22:14	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-45 **Lab ID: 2616405005** Collected: 03/20/19 12:40 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.043**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 19:40	7440-42-8	
Calcium	**31.2**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 19:45	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**302**	mg/L	25.0	10.0	1		03/22/19 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**27.7**	mg/L	0.25	0.024	1		03/26/19 08:23	16887-00-6	
Fluoride	**0.066J**	mg/L	0.30	0.029	1		03/26/19 08:23	16984-48-8	
Sulfate	**127**	mg/L	10.0	0.17	10		03/27/19 22:37	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-50 **Lab ID: 2616405006** Collected: 03/20/19 13:35 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.34**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 19:51	7440-42-8	
Calcium	**222**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 19:57	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2280**	mg/L	25.0	10.0	1		03/22/19 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.5**	mg/L	0.25	0.024	1		03/26/19 08:46	16887-00-6	
Fluoride	**0.21J**	mg/L	0.30	0.029	1		03/26/19 08:46	16984-48-8	
Sulfate	**1740**	mg/L	50.0	0.85	50		03/27/19 23:00	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: BRGWC-52I **Lab ID: 2616405007** Collected: 03/20/19 10:20 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.6**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 20:14	7440-42-8	
Calcium	**40.3**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 20:20	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**366**	mg/L	25.0	10.0	1		03/22/19 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.7**	mg/L	0.25	0.024	1		03/26/19 09:08	16887-00-6	
Fluoride	**0.14J**	mg/L	0.30	0.029	1		03/26/19 09:08	16984-48-8	
Sulfate	**180**	mg/L	10.0	0.17	10		03/27/19 23:23	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: Dup-2 **Lab ID: 2616405008** Collected: 03/20/19 00:00 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.6**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 20:25	7440-42-8	
Calcium	**41.4**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 20:31	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**354**	mg/L	25.0	10.0	1		03/22/19 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.7**	mg/L	0.25	0.024	1		03/26/19 09:31	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		03/26/19 09:31	16984-48-8	
Sulfate	**193**	mg/L	10.0	0.17	10		03/27/19 23:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: Dup-3 **Lab ID: 2616405009** Collected: 03/20/19 00:00 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.5**	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 20:37	7440-42-8	
Calcium	**53.7**	mg/L	25.0	0.69	50	03/25/19 18:21	03/26/19 20:43	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**409**	mg/L	25.0	10.0	1		03/22/19 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.2**	mg/L	0.25	0.024	1		03/26/19 11:26	16887-00-6	
Fluoride	**0.16J**	mg/L	0.30	0.029	1		03/26/19 11:26	16984-48-8	
Sulfate	**230**	mg/L	10.0	0.17	10		03/28/19 01:17	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: FB-3 **Lab ID: 2616405010** Collected: 03/20/19 17:15 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 20:48	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	03/25/19 18:21	03/26/19 20:48	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**13.0J**	mg/L	25.0	10.0	1		03/22/19 13:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.31**	mg/L	0.25	0.024	1		03/26/19 11:49	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/26/19 11:49	16984-48-8	
Sulfate	**0.11J**	mg/L	1.0	0.017	1		03/26/19 11:49	14808-79-8	B

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: EB-2 **Lab ID: 2616405011** Collected: 03/20/19 13:30 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 20:54	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	03/25/19 18:21	03/26/19 20:54	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**35.0**	mg/L	25.0	10.0	1		03/26/19 22:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.31**	mg/L	0.25	0.024	1		03/26/19 12:11	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/26/19 12:11	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/26/19 12:11	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Sample: EB-3 **Lab ID: 2616405012** Collected: 03/20/19 13:00 Received: 03/21/19 10:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/25/19 18:21	03/26/19 21:00	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	03/25/19 18:21	03/26/19 21:00	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**13.0J**	mg/L	25.0	10.0	1		03/26/19 22:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.094J**	mg/L	0.25	0.024	1		03/27/19 21:08	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/27/19 21:08	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/27/19 21:08	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 24808 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616369001, 2616369002, 2616369003, 2616369004, 2616369005, 2616369006

METHOD BLANK: 111716 Matrix: Water
Associated Lab Samples: 2616369001, 2616369002, 2616369003, 2616369004, 2616369005, 2616369006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	03/22/19 20:08	
Calcium	mg/L	ND	0.50	0.014	03/22/19 20:08	

LABORATORY CONTROL SAMPLE: 111717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.97	97	80-120	
Calcium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 111718 111719

Parameter	Units	2616369003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.1	1	1	1.9	2.0	81	90	75-125	5	20	
Calcium	mg/L	60.2	1	1	63.0	63.0	284	286	75-125	0	20	M6

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

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QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 25068 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616405001, 2616405002, 2616405003, 2616405004, 2616405005, 2616405006, 2616405007, 2616405008, 2616405009, 2616405010, 2616405011, 2616405012

METHOD BLANK: 113023 Matrix: Water
Associated Lab Samples: 2616405001, 2616405002, 2616405003, 2616405004, 2616405005, 2616405006, 2616405007, 2616405008, 2616405009, 2616405010, 2616405011, 2616405012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	03/26/19 18:02	
Calcium	mg/L	ND	0.50	0.014	03/26/19 18:02	

LABORATORY CONTROL SAMPLE: 113024

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.99	99	80-120	
Calcium	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 113025 113026

Parameter	Units	2616405001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.5	1	1	2.5	2.5	93	98	75-125	2	20	
Calcium	mg/L	54.2	1	1	54.8	53.9	60	-25	75-125	2	20	M6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 24873 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616369001, 2616369002, 2616369003, 2616369004, 2616369005, 2616369006

LABORATORY CONTROL SAMPLE: 112147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	425	106	84-108	

SAMPLE DUPLICATE: 112148

Parameter	Units	2616179002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	15.0J	17.0J	12	10	D6

SAMPLE DUPLICATE: 112340

Parameter	Units	2616369004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	161	20.0J	156	10	D6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 24911 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616405001, 2616405002, 2616405003, 2616405004, 2616405005, 2616405006, 2616405007, 2616405008, 2616405009, 2616405010

LABORATORY CONTROL SAMPLE: 112288

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	395	99	84-108	

SAMPLE DUPLICATE: 112289

Parameter	Units	2616371001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	68.0	76.0	11	10	D6

SAMPLE DUPLICATE: 112290

Parameter	Units	2616405001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	412	386	7	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 25049
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616405011, 2616405012

LABORATORY CONTROL SAMPLE: 112956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 112957

Parameter	Units	2616510001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	35.0	36.0	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 24985 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616369001, 2616369002, 2616369003, 2616369004, 2616369005, 2616369006

METHOD BLANK: 112760 Matrix: Water
Associated Lab Samples: 2616369001, 2616369002, 2616369003, 2616369004, 2616369005, 2616369006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	03/24/19 14:11	
Fluoride	mg/L	ND	0.30	0.029	03/24/19 14:11	
Sulfate	mg/L	ND	1.0	0.017	03/24/19 14:11	

LABORATORY CONTROL SAMPLE: 112761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10	100	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 112762 112763

Parameter	Units	2616191001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.3	10	10	14.8	15.2	85	88	90-110	2	15	M1
Fluoride	mg/L	ND	10	10	9.0	9.5	90	95	90-110	5	15	
Sulfate	mg/L	22.0	10	10	28.9	29.2	69	72	90-110	1	15	M1

MATRIX SPIKE SAMPLE: 112764

Parameter	Units	2616228001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	147	10	100	-469	90-110	E
Fluoride	mg/L	ND	10	10.3	103	90-110	
Sulfate	mg/L	574	10	287	-2870	90-110	E

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 25012 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616405001, 2616405002, 2616405003, 2616405004, 2616405005, 2616405006, 2616405007, 2616405008, 2616405009, 2616405010, 2616405011

METHOD BLANK: 112819 Matrix: Water
Associated Lab Samples: 2616405001, 2616405002, 2616405003, 2616405004, 2616405005, 2616405006, 2616405007, 2616405008, 2616405009, 2616405010, 2616405011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.31	0.25	0.024	03/26/19 00:00	
Fluoride	mg/L	ND	0.30	0.029	03/26/19 00:00	
Sulfate	mg/L	0.10J	1.0	0.017	03/26/19 00:00	

LABORATORY CONTROL SAMPLE: 112820

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	10.8	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 112821 112822

Parameter	Units	2616371001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.0	10	10	12.2	12.2	102	102	90-110	0	15	
Fluoride	mg/L	0.037J	10	10	10.4	10.4	103	104	90-110	0	15	
Sulfate	mg/L	0.78J	10	10	11.8	11.8	110	110	90-110	0	15	

MATRIX SPIKE SAMPLE: 112823

Parameter	Units	2616371002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	10	12.2	97	90-110	
Fluoride	mg/L	0.066J	10	10.0	100	90-110	
Sulfate	mg/L	6.0	10	16.2	101	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

QC Batch: 25289
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616405012

METHOD BLANK: 113957 Matrix: Water
Associated Lab Samples: 2616405012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.062J	0.25	0.024	03/27/19 20:23	
Fluoride	mg/L	ND	0.30	0.029	03/27/19 20:23	
Sulfate	mg/L	ND	1.0	0.017	03/27/19 20:23	

LABORATORY CONTROL SAMPLE: 113958

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 113959 113960

Parameter	Units	2616405012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.094J	10	10	9.8	9.8	98	97	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.4	9.5	94	95	90-110	1	15	
Sulfate	mg/L	ND	10	10	8.9	8.9	89	89	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 113961

Parameter	Units	2616407006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.36	10	9.8	94	90-110	
Fluoride	mg/L	ND	10	9.9	99	90-110	
Sulfate	mg/L	0.91J	10	8.6	77	90-110	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

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.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616369001	BRGWA-12S	EPA 3005A	24808	EPA 6020B	24824
2616369002	BRGWA-12I	EPA 3005A	24808	EPA 6020B	24824
2616369003	BRGWC-27I	EPA 3005A	24808	EPA 6020B	24824
2616369004	BRGWA-23S	EPA 3005A	24808	EPA 6020B	24824
2616369005	BRGWC-47	EPA 3005A	24808	EPA 6020B	24824
2616369006	EB-1	EPA 3005A	24808	EPA 6020B	24824
2616405001	BRGWC-25I	EPA 3005A	25068	EPA 6020B	25105
2616405002	BRGWC-29I	EPA 3005A	25068	EPA 6020B	25105
2616405003	BRGWC-30I	EPA 3005A	25068	EPA 6020B	25105
2616405004	BRGWC-32S	EPA 3005A	25068	EPA 6020B	25105
2616405005	BRGWC-45	EPA 3005A	25068	EPA 6020B	25105
2616405006	BRGWC-50	EPA 3005A	25068	EPA 6020B	25105
2616405007	BRGWC-52I	EPA 3005A	25068	EPA 6020B	25105
2616405008	Dup-2	EPA 3005A	25068	EPA 6020B	25105
2616405009	Dup-3	EPA 3005A	25068	EPA 6020B	25105
2616405010	FB-3	EPA 3005A	25068	EPA 6020B	25105
2616405011	EB-2	EPA 3005A	25068	EPA 6020B	25105
2616405012	EB-3	EPA 3005A	25068	EPA 6020B	25105
2616369001	BRGWA-12S	SM 2540C	24873		
2616369002	BRGWA-12I	SM 2540C	24873		
2616369003	BRGWC-27I	SM 2540C	24873		
2616369004	BRGWA-23S	SM 2540C	24873		
2616369005	BRGWC-47	SM 2540C	24873		
2616369006	EB-1	SM 2540C	24873		
2616405001	BRGWC-25I	SM 2540C	24911		
2616405002	BRGWC-29I	SM 2540C	24911		
2616405003	BRGWC-30I	SM 2540C	24911		
2616405004	BRGWC-32S	SM 2540C	24911		
2616405005	BRGWC-45	SM 2540C	24911		
2616405006	BRGWC-50	SM 2540C	24911		
2616405007	BRGWC-52I	SM 2540C	24911		
2616405008	Dup-2	SM 2540C	24911		
2616405009	Dup-3	SM 2540C	24911		
2616405010	FB-3	SM 2540C	24911		
2616405011	EB-2	SM 2540C	25049		
2616405012	EB-3	SM 2540C	25049		
2616369001	BRGWA-12S	EPA 300.0	24985		
2616369002	BRGWA-12I	EPA 300.0	24985		
2616369003	BRGWC-27I	EPA 300.0	24985		
2616369004	BRGWA-23S	EPA 300.0	24985		
2616369005	BRGWC-47	EPA 300.0	24985		
2616369006	EB-1	EPA 300.0	24985		
2616405001	BRGWC-25I	EPA 300.0	25012		
2616405002	BRGWC-29I	EPA 300.0	25012		
2616405003	BRGWC-30I	EPA 300.0	25012		
2616405004	BRGWC-32S	EPA 300.0	25012		

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch Pond BCD
Pace Project No.: 2616369

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616405005	**BRGWC-45**	EPA 300.0	25012		
2616405006	**BRGWC-50**	EPA 300.0	25012		
2616405007	**BRGWC-52I**	EPA 300.0	25012		
2616405008	**Dup-2**	EPA 300.0	25012		
2616405009	**Dup-3**	EPA 300.0	25012		
2616405010	**FB-3**	EPA 300.0	25012		
2616405011	**EB-2**	EPA 300.0	25012		
2616405012	**EB-3**	EPA 300.0	25289		

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Pond BCD

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III (Boron & Calcium) (EPA 6020)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)								LAB ID NUMBER
CONTAINER TYPE								P	P								
PRESERVATION								3&7	7								
03/19/19	1225	GW		X	BRGWA-12S	2		X	X								1
03/19/19	1435	GW		X	BRGWA-12I	2		X	X								2
03/19/19	1655	GW		X	BRGWC-27I	2		X	X								3
03/19/19	1530	GW		X	BRGWA-23S	2		X	X								4
03/19/19	1640	GW		X	BRGWC-47	2		X	X								5
03/19/19	1705	W		X	EB-1	2		X	X								6

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE:
DATE/TIME: 3-20-19 1430
RELINQUISHED BY: [signature]
DATE/TIME: 3/20/19

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 3/20/19 1700
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

Temperature: Man: 1.5°C Max:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

WO# : 2616369

Pace Analytical

Sample Condition Upon Receipt

WO#: 2616369

PM: BM Due Date: 03/27/19

CLIENT: GAPower-CCR

Client Name: GA Power

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Tracking #: _____

Optional
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 081 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.5°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/20/19 dt

Temp should be above freezing to 6°C

Comments:

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

Pace Analytical®
Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: rachel_kirkman@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Branch

PROJECT #: Pond BCD

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III (Boron & Calcium) (EPA 6020)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)							LAB ID NUMBER
CONTAINER TYPE:								P	P							
PRESERVATION:								3&7	7							
03/20/19	1650	GW		X	BRGWC-25I	2		X	X							
03/20/19	1525	GW		X	BRGWC-29I	2		X	X							
03/20/19	1305	GW		X	BRGWC-30I	2		X	X							
03/20/19	1405	GW		X	BRGWC-32S	2		X	X							
03/20/19	1240	GW		X	BRGWC-45	2		X	X							
03/20/19	1335	GW		X	BRGWC-50	2		X	X							
03/20/19	1020	GW		X	BRGWC-52I	2		X	X							
03/20/19	--	GW		X	DUP-2	2		X	X							
03/20/19	--	GW		X	DUP-3	2		X	X							
03/20/19	1715	W		X	FB-3	2		X	X							
03/20/19	1330	W		X	EB-2	2		X	X							
03/20/19	1300	W		X	EB-3	2		X	X							

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 2616405

2616405

SAMPLED BY AND TITLE: C. Tidwell/K. Minkkinen
DATE/TIME: 3-20-19 | 17:30
RELINQUISHED BY:
DATE/TIME: 3-21-19 @ 10:35

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 3/21/19 1033

pH checked: Yes No NA
pH: Yes No NA
Temperature: Min: 5.3 Max:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2616405

PM: BM Due Date: 03/28/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.3 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 3/21/19 MP

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: W			
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No	
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A
Trip Blank Present:	☐Yes	☐No	☑N/A
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A
Pace Trip Blank Lot # (if purchased):			

Comments:		
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
	Initial when completed	Lot # of added preservative
14.		
15.		
16.		

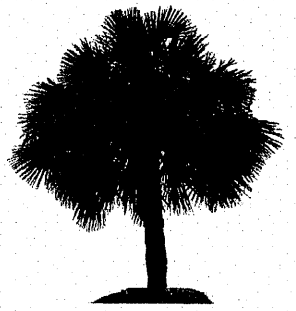
Client Notification/ Resolution: Field Data Required? Y / N

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)



State of Florida

Department of Health, Bureau of Public Health Laboratories

This is to certify that

E87315

ANALYTICAL SERVICES, INC.
110 TECHNOLOGY PARKWAY
NORCROSS, 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 - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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: July 01, 2015 Expiration Date: June 30, 2016

Carina Blackmore, DVM, PhD, Dipl. ACVPM, CPM
Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-31-07/01/2015
Supersedes all previously issued certificates

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E87315

PACE ANALYTICAL SERVICES, INC. - ATLANTA
110 TECHNOLOGY PARKWAY
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,
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DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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Date Issued: July 01, 2016 Expiration Date: June 30, 2017

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-33-07/01/2016
Supersedes all previously issued certificates

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

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DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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Date Issued: July 01, 2017 Expiration Date: June 30, 2018

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-37-07/01/2017
Supersedes all previously issued certificates

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

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DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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Date Issued: July 01, 2018 Expiration Date: June 30, 2019

Patty A. Lewandowski, MBA, MT(ASCP)
Chief Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-39-07/01/2018
Supersedes all previously issued certificates

APPENDIX A

Field Data Forms

FIELD DATA FORMS

August – September 2016

Product Name: Low-Flow System

Date: 2016-09-01 17:36:34

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	QED bladder pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch AP	Tubing Diameter	.17 in
Site Name	BRGWA-12S	Tubing Length	60 ft
Latitude	33º 11' 52.93"		
Longitude	-83º -18' -53.64"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.4578054 L
Well Total Depth	61.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5 in
Depth to Water	48.70 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	17:11:17	4499.96	21.51	6.01	69.72	5.20	49.10	7.36	93.66
Last 5	17:16:17	4799.96	21.46	6.01	66.21	4.90	49.10	7.28	92.83
Last 5	17:21:18	5100.95	21.44	6.02	65.55	4.46	49.10	7.06	98.72
Last 5	17:26:18	5400.95	21.54	6.01	68.84	4.04	49.10	7.11	97.62
Last 5	17:31:18	5700.94	21.46	6.00	68.24	3.45	49.10	7.25	97.16
Variance 0			-0.02	0.01	-0.66			-0.22	5.89
Variance 1			0.10	-0.01	3.29			0.05	-1.10
Variance 2			-0.08	-0.00	-0.60			0.14	-0.46

Notes

Sampled at 17:35. Sunny 80s

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 14:22:56

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	QED bladder pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch AP	Tubing Diameter	.17 in
Site Name	BRGWA-12I	Tubing Length	80 ft
Latitude	33º 11' 52.67"		
Longitude	-83º -18' -53.49"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	74 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	50 mL/min
Well diameter	2 in	Total System Volume	0.5470738 L
Well Total Depth	81.05 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	44 in
Depth to Water	47.32 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	13:47:43	1200.02	23.34	6.74	160.77	3.88	50.60	2.13	70.24
Last 5	13:52:43	1500.02	24.17	6.73	161.12	3.87	50.80	2.09	70.39
Last 5	13:57:43	1800.01	26.30	6.73	156.62	2.15	50.90	2.06	71.52
Last 5	14:02:43	2100.01	25.74	6.72	154.44	2.02	50.90	2.11	71.57
Last 5	14:07:43	2399.98	26.17	6.71	152.92	2.98	51.00	2.17	71.28
Variance 0			2.13	-0.01	-4.49			-0.03	1.14
Variance 1			-0.57	-0.00	-2.18			0.05	0.04
Variance 2			0.44	-0.01	-1.52			0.06	-0.28

Notes

Collected at 15:15. Sunny 90s

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-06 14:21:44

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	QED BLADDER PUMP
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch AP	Tubing Diameter	.17 in
Site Name	BRGWA-23S	Tubing Length	48 ft
Latitude	33º 11' 39.6"		
Longitude	-83º -18' -45.1"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.4042443 L
Well Total Depth	47.57 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10 in
Depth to Water	32.92 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	13:54:33	3304.98	23.11	6.48	182.16	1.29	33.70	3.81	3.40
Last 5	13:59:33	3604.98	23.13	6.49	182.49	1.22	33.70	3.69	4.23
Last 5	14:04:33	3904.97	23.38	6.50	192.94	1.17	33.70	3.76	2.73
Last 5	14:09:33	4204.98	23.61	6.49	195.48	2.58	33.70	3.65	1.21
Last 5	14:14:33	4504.98	23.74	6.49	202.28	1.24	33.70	3.52	0.64
Variance 0			0.25	0.01	10.45			0.08	-1.50
Variance 1			0.23	-0.00	2.54			-0.12	-1.52
Variance 2			0.14	-0.00	6.80			-0.13	-0.57

Notes

Collected at 14:14. Sunny 90s

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-08 14:43:53

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Peripump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch AP	Tubing Diameter	.17 in
Site Name	BRGWC-25I	Tubing Length	24 ft
Latitude	33º 11' 15.54"		
Longitude	-83º -18' -4.9"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	270 mL/min
Well diameter	2 in	Total System Volume	0.1971222 L
Well Total Depth	23.75 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4 in
Depth to Water	9.40 ft	Total Volume Pumped	9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	14:20:05	300.01	21.68	6.07	663.68	3.78	9.60	0.29	7.08
Last 5	14:25:05	600.02	21.28	6.07	642.70	1.34	9.60	0.26	7.73
Last 5	14:30:05	900.02	21.74	6.08	644.86	1.00	10.20	0.26	7.46
Last 5	14:35:05	1200.00	21.30	6.07	644.02	1.11	9.60	0.24	9.13
Last 5	14:40:05	1500.00	21.57	6.07	643.23	0.97	9.60	0.23	14.01
Variance 0			0.47	0.00	2.15			-0.00	-0.27
Variance 1			-0.44	-0.00	-0.83			-0.02	1.67
Variance 2			0.27	-0.01	-0.80			-0.01	4.88

Notes

Collected at 14:45. Sunny 90s.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-08 12:38:15

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Peripump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch	Tubing Diameter	.17 in
Site Name	BRGWC-27S	Tubing Length	28 ft
Latitude	33º 11' 7.2"		
Longitude	-83º -18' -23.95"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	27.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	4.80 ft	Total Volume Pumped	6.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	12:15:31	300.02	24.56	5.45	670.92	2.92	4.90	0.54	69.56
Last 5	12:20:31	600.01	23.43	5.50	672.65	1.53	4.90	0.75	66.02
Last 5	12:25:31	900.05	23.43	5.49	679.24	1.23	4.90	0.18	62.89
Last 5	12:30:31	1200.02	23.37	5.51	671.02	0.83	4.90	0.12	61.92
Last 5	12:35:31	1500.00	23.21	5.51	679.29	1.33	4.90	0.32	61.28
Variance 0			-0.00	-0.01	6.59			-0.56	-3.13
Variance 1			-0.06	0.02	-8.22			-0.07	-0.96
Variance 2			-0.16	-0.00	8.27			0.20	-0.64

Notes

Collected at 12:40. Sunny 90s

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-08 13:40:24

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Peripump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch	Tubing Diameter	.17 in
Site Name	BRGWC-29I	Tubing Length	24 ft
Latitude	33º 11' 12.81"		
Longitude	-83º -18' -7.46"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	280 mL/min
Well diameter	2 in	Total System Volume	0.1971222 L
Well Total Depth	23.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	10.02 ft	Total Volume Pumped	8.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	13:15:53	300.02	23.47	4.74	850.03	1.29	10.10	0.30	68.38
Last 5	13:20:53	600.01	22.75	4.67	865.23	3.26	10.20	0.23	58.04
Last 5	13:25:53	900.01	22.71	4.63	872.09	2.61	10.20	0.19	67.55
Last 5	13:30:53	1200.01	23.01	4.61	878.88	1.54	10.20	0.16	66.72
Last 5	13:35:53	1500.00	23.54	4.62	874.70	1.35	10.20	0.15	58.64
Variance 0			-0.04	-0.04	6.86			-0.04	9.52
Variance 1			0.30	-0.02	6.79			-0.03	-0.83
Variance 2			0.53	0.00	-4.18			-0.00	-8.08

Notes

Collected at 13:40. Sunny 90s. FB-2-9-8-16 here at 13:25. Poured with lab provided blank water

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-06 15:29:55

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Peripump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch AP	Tubing Diameter	.17 in
Site Name	BRGWC-30I	Tubing Length	25 ft
Latitude	33º 11' 25.87"		
Longitude	-83º -18' -47.37"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	350 mL/min
Well diameter	2 in	Total System Volume	0.2015856 L
Well Total Depth	23.21 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	4.40 ft	Total Volume Pumped	10.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	15:06:30	300.02	22.71	6.24	671.60	2.21	4.60	0.11	62.94
Last 5	15:11:30	600.01	22.07	6.24	673.79	1.06	4.70	0.09	61.99
Last 5	15:16:30	900.01	22.09	6.22	669.59	0.93	4.70	0.09	63.38
Last 5	15:21:30	1200.01	22.33	6.23	669.31	0.26	4.70	0.09	63.17
Last 5	15:26:30	1500.01	22.21	6.23	661.84	0.27	4.70	0.09	62.75
Variance 0			0.02	-0.02	-4.20			-0.00	1.39
Variance 1			0.24	0.01	-0.28			0.00	-0.21
Variance 2			-0.11	-0.00	-7.47			0.00	-0.42

Notes

Collected at 15:30. Sunny 90s

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-08 09:51:48

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	QED BLADDER PUMP
Company Name	ACC	Tubing Type	poly
Project Name	Plant Branch AP	Tubing Diameter	.17 in
Site Name	BRGWC-32S	Tubing Length	50 ft
Latitude	33º 11' 16.91"		
Longitude	-83º -18' -38.04"		
Sonde SN	466086		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.4131711 L
Well Total Depth	48.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8 in
Depth to Water	34.50 ft	Total Volume Pumped	5.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	09:25:04	300.05	20.15	5.88	792.52	1.89	35.40	4.18	59.81
Last 5	09:30:04	600.01	20.21	5.88	803.61	0.86	35.40	1.15	52.11
Last 5	09:35:04	900.01	20.24	5.88	804.25	0.60	35.40	0.80	56.42
Last 5	09:40:04	1200.01	20.09	5.89	805.09	0.45	35.40	0.75	55.20
Last 5	09:45:04	1500.01	20.04	5.89	805.37	0.51	35.40	0.67	55.42
Variance 0			0.03	-0.00	0.64			-0.35	4.31
Variance 1			-0.16	0.01	0.84			-0.04	-1.22
Variance 2			-0.05	0.00	0.28			-0.09	0.22

Notes

Collected at 09:50. Sunny 70s. EB-2-9-8-16 here at 08:50 - for QED bladder pump, tubing, gloves - with lab provide blank water.

Grab Samples

FIELD DATA FORMS

November 2016

Product Name: Low-Flow System

Date: 2016-11-16 14:06:15

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED portable bladder pump
Company Name	Golder Associates	Tubing Type	peristaltic
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	448902		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	56.01 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.7191639 L
Well Total Depth	61.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.26 in
Depth to Water	49.22 ft	Total Volume Pumped	6.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:44:16	2400.15	20.15	6.05	86.97	7.00	49.48	6.91	97.44
Last 5	13:49:16	2700.15	20.41	6.04	86.30	5.53	49.49	6.88	97.93
Last 5	13:54:16	3000.15	20.26	6.02	85.29	3.45	49.48	6.93	98.31
Last 5	13:59:16	3300.15	20.22	6.01	84.88	2.99	49.48	6.92	98.53
Last 5	14:04:16	3600.15	20.28	6.00	85.43	2.83	49.48	6.91	98.79
Variance 0			-0.15	-0.02	-1.01			0.05	0.38
Variance 1			-0.05	-0.01	-0.41			-0.01	0.22
Variance 2			0.06	-0.01	0.55			-0.00	0.25

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-16 17:27:49

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED portable bladder pump
Company Name	Golder Associates	Tubing Type	peristaltic
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	80 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	448902		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	75.54 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9122185 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.27 in
Depth to Water	48.95 ft	Total Volume Pumped	10.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	17:02:34	5101.14	19.61	6.11	197.05	1.53	56.92	3.15	5.53
Last 5	17:07:34	5401.14	19.51	6.11	200.30	1.41	--	3.06	10.95
Last 5	17:12:45	5712.14	19.66	6.11	200.71	1.50	56.98	3.37	8.94
Last 5	17:17:47	6014.14	19.42	6.10	201.20	1.63	57.11	3.10	-1.19
Last 5	17:22:48	6315.14	19.33	6.15	202.04	1.20	57.22	3.18	2.92
Variance 0			0.16	0.00	0.40			0.31	-2.02
Variance 1			-0.25	-0.01	0.49			-0.27	-10.12
Variance 2			-0.09	0.05	0.84			0.09	4.11

Notes

Changed out CO2 tank at 1710- did not record WL for the 1707 reading as the well was not purging at the time.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-17 14:47:10

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED portable bladder pump
Company Name	Golder Associates	Tubing Type	bonded
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	448902		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	40 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.5743729 L
Well Total Depth	43.83 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	34.94 ft	Total Volume Pumped	16.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:23:16	5106.73	21.89	5.83	287.28	1.21	37.34	1.01	15.95
Last 5	14:28:16	5406.74	21.86	5.82	289.09	1.24	37.34	1.07	16.14
Last 5	14:33:16	5706.74	21.82	5.81	289.30	1.16	37.34	1.05	16.69
Last 5	14:38:16	6006.73	21.72	5.81	289.71	1.10	37.34	1.03	17.19
Last 5	14:43:17	6307.74	21.69	5.79	286.81	0.72	37.34	1.04	18.16
Variance 0			-0.04	-0.01	0.21			-0.02	0.55
Variance 1			-0.10	-0.01	0.41			-0.03	0.50
Variance 2			-0.03	-0.01	-2.90			0.01	0.97

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-16 16:33:23

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	geopump
Company Name	Golder Associates	Tubing Type	peristaltic
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417070		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	24.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.13 in
Depth to Water	9.76 ft	Total Volume Pumped	5.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:11:57	300.03	19.37	6.18	823.59	4.60	9.88	0.23	-51.13
Last 5	16:16:57	600.02	19.59	6.01	816.12	1.14	9.89	0.20	-22.59
Last 5	16:21:57	900.02	19.50	5.97	812.10	0.74	9.89	0.18	-17.56
Last 5	16:26:57	1200.02	19.50	5.96	806.66	0.75	9.89	0.18	-16.22
Last 5	16:31:57	1500.02	19.41	5.96	805.25	0.83	9.89	0.16	-18.36
Variance 0			-0.09	-0.05	-4.02			-0.02	5.03
Variance 1			0.00	-0.01	-5.44			-0.01	1.34
Variance 2			-0.09	0.00	-1.41			-0.01	-2.14

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-18 08:43:43

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	geopump
Company Name	Golder Associates	Tubing Type	peristaltic
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	448902		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	24 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	350 mL/min
Well diameter	2 in	Total System Volume	0.2462198 L
Well Total Depth	27.22 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	6.14 ft	Total Volume Pumped	9.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	08:22:04	300.16	18.66	5.91	677.12	0.80	6.24	0.17	107.22
Last 5	08:27:04	600.03	19.15	5.64	672.99	1.65	6.25	0.12	93.77
Last 5	08:32:04	900.02	19.41	5.56	670.87	1.98	6.26	0.10	85.92
Last 5	08:37:04	1200.02	19.58	5.54	669.10	2.14	6.27	0.09	80.85
Last 5	08:42:04	1500.02	19.62	5.53	666.22	0.81	6.26	0.08	75.41
Variance 0			0.26	-0.08	-2.13			-0.03	-7.85
Variance 1			0.17	-0.02	-1.76			-0.01	-5.07
Variance 2			0.04	-0.01	-2.88			-0.01	-5.44

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-21 10:59:20

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	geopump
Company Name	Golder Associates	Tubing Type	peristaltic
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417070		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	13 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.1792685 L
Well Total Depth	23.15 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.06 in
Depth to Water	10.20 ft	Total Volume Pumped	9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:37:28	600.02	19.12	4.47	816.36	3.52	10.27	0.22	55.93
Last 5	10:42:28	900.02	19.71	4.47	819.51	1.82	10.27	0.16	60.77
Last 5	10:47:28	1200.02	19.73	4.44	827.00	1.24	10.27	0.15	65.20
Last 5	10:52:28	1500.02	19.50	4.44	824.64	0.68	10.26	0.15	61.99
Last 5	10:57:28	1800.02	19.49	4.44	834.13	0.62	10.26	0.14	62.78
Variance 0			0.02	-0.02	7.48			-0.01	4.43
Variance 1			-0.23	0.00	-2.36			0.00	-3.20
Variance 2			-0.01	-0.00	9.49			-0.01	0.79

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-21 11:00:06

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	geopump
Company Name	Golder Associates	Tubing Type	peristaltic
Project Name	Plant Branch	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	448902		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	18.23 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	300 mL/min
Well diameter	2 in	Total System Volume	0.2239027 L
Well Total Depth	23.22 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.34 in
Depth to Water	4.21 ft	Total Volume Pumped	6.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:43:43	300.03	18.44	6.21	660.26	13.60	4.48	0.17	6.95
Last 5	10:48:43	600.02	18.82	6.23	653.43	4.63	4.51	0.13	4.54
Last 5	10:53:43	900.02	18.93	6.23	650.26	2.43	4.54	0.10	12.17
Last 5	10:58:43	1200.02	19.10	6.23	647.96	2.60	4.55	0.08	15.96
Last 5									
Variance 0			0.38	0.01	-6.83			-0.04	-2.40
Variance 1			0.12	-0.00	-3.17			-0.03	7.62
Variance 2			0.17	0.01	-2.30			-0.02	3.80

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-21 09:50:49

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	portable bp
Company Name	Golder Associates	Tubing Type	bonded
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	448902		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	43.28 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.603331 L
Well Total Depth	48.28 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	36.64 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:28:19	3300.01	17.03	5.53	831.72	1.25	37.48	1.56	38.92
Last 5	09:33:19	3600.01	17.10	5.54	832.13	0.77	37.48	1.75	36.75
Last 5	09:38:19	3899.83	17.10	5.55	834.56	0.99	37.48	1.34	34.54
Last 5	09:43:19	4199.83	17.14	5.55	834.51	0.55	37.48	1.33	32.20
Last 5	09:48:19	4499.83	17.26	5.56	832.87	0.61	37.48	1.28	31.22
Variance 0			-0.00	0.01	2.43			-0.41	-2.21
Variance 1			0.04	-0.00	-0.05			-0.01	-2.34
Variance 2			0.12	0.01	-1.64			-0.05	-0.98

Notes

Grab Samples

FIELD DATA FORMS

February – March 2018

Product Name: Low-Flow System

Date: 2017-02-21 09:33:55

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Folder Associates	Tubing Type	Poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	56 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamont's 2020we	Pump placement from TOC	56 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7349517 L
Well Total Depth	61.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	50.09 ft	Total Volume Pumped	4.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:13:05	600.02	18.07	6.15	74.66	7.55	50.39	7.51	195.43
Last 5	09:18:05	900.03	18.10	6.15	75.16	5.00	50.43	7.90	192.91
Last 5	09:23:05	1200.02	18.16	6.13	74.79	2.95	50.44	7.68	190.17
Last 5	09:28:05	1500.22	18.17	6.11	74.52	2.70	40.46	7.68	190.17
Last 5	09:33:05	1800.22	18.25	6.09	73.84	2.24	50.45	7.62	190.05
Variance 0			0.06	-0.02	-0.37			-0.22	-2.74
Variance 1			0.01	-0.02	-0.27			0.00	0.00
Variance 2			0.08	-0.02	-0.67			-0.06	-0.13

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-21 11:20:03

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Folder Associates	Tubing Type	Poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	75 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamont's 2020we	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8197567 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	49.81 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:48:27	1800.55	18.65	6.54	182.93	1.36	55.61	3.23	120.89
Last 5	10:53:27	2100.54	18.65	6.54	181.90	1.20	55.86	3.06	130.46
Last 5	10:58:27	2400.55	18.74	6.53	181.03	1.37	56.11	2.88	137.63
Last 5	11:03:27	2700.55	18.75	6.53	180.15	1.01	56.34	2.73	143.62
Last 5	11:08:30	3003.55	18.78	6.52	178.26	1.40	56.50	2.66	144.18
Variance 0			0.09	-0.00	-0.88			-0.18	7.17
Variance 1			0.01	-0.00	-0.88			-0.15	5.99
Variance 2			0.03	-0.01	-1.88			-0.07	0.56

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-21 13:41:38

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamont's 2020we	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6724638 L
Well Total Depth	47.57 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	34.37 ft	Total Volume Pumped	9.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:20:44	300.02	20.10	6.17	212.30	1.08	36.15	0.54	-15.84
Last 5	13:25:44	600.02	20.19	6.17	199.92	0.98	36.21	0.54	-5.20
Last 5	13:30:44	900.02	20.21	6.16	194.52	1.10	36.30	0.51	2.56
Last 5	13:35:44	1200.02	19.94	6.15	194.42	0.97	36.42	0.46	10.75
Last 5	13:40:44	1500.02	20.05	6.15	195.51	0.94	36.54	0.42	18.48
Variance 0			0.02	-0.01	-5.40			-0.03	7.76
Variance 1			-0.27	-0.01	-0.10			-0.05	8.19
Variance 2			0.11	-0.01	1.09			-0.03	7.73

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-21 13:31:29

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Folder Associates	Tubing Type	poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	24.41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	19.41 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.5939521 L
Well Total Depth	24.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	7.65 ft	Total Volume Pumped	12.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:10:01	3000.06	17.43	5.98	806.24	8.27	7.68	0.35	38.98
Last 5	13:15:01	3300.06	17.40	5.98	807.47	7.16	7.68	0.31	33.12
Last 5	13:20:01	3600.07	17.42	5.98	806.51	4.86	7.68	0.29	28.82
Last 5	13:25:01	3900.06	17.48	5.98	808.13	4.61	7.66	0.27	24.71
Last 5	13:30:01	4200.06	17.40	5.98	809.36	4.05	7.66	0.25	24.68
Variance 0			0.02	-0.00	-0.96			-0.03	-4.31
Variance 1			0.05	-0.00	1.62			-0.02	-4.11
Variance 2			-0.07	-0.00	1.23			-0.02	-0.03

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-21 15:29:15

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamont's 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6099758 L
Well Total Depth	33.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	3.18 ft	Total Volume Pumped	9.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:08:36	1500.95	19.32	5.64	523.64	7.48	3.29	0.16	235.82
Last 5	15:13:36	1800.95	19.32	5.63	524.87	5.26	3.23	0.17	233.89
Last 5	15:18:36	2100.95	19.37	5.64	521.29	4.04	3.31	0.13	228.81
Last 5	15:23:36	2400.95	19.37	5.64	522.40	3.30	3.26	0.11	223.27
Last 5	15:28:36	2700.95	19.32	5.63	521.83	3.22	3.28	0.09	217.47
Variance 0			0.04	0.02	-3.59			-0.04	-5.08
Variance 1			0.00	-0.01	1.11			-0.03	-5.54
Variance 2			-0.04	-0.00	-0.57			-0.02	-5.81

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-22 09:57:56

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	18 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamont's 2020we	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-29I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5653416 L
Well Total Depth	23.63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	9.11 ft	Total Volume Pumped	9.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:37:01	1500.02	18.94	4.41	788.10	1.41	9.21	0.76	198.80
Last 5	09:42:01	1800.64	18.98	4.42	782.63	1.37	9.19	0.92	198.75
Last 5	09:47:01	2100.64	18.98	4.42	779.19	1.34	9.18	0.77	197.07
Last 5	09:52:01	2400.64	19.01	4.42	779.88	1.25	9.17	0.68	198.10
Last 5	09:57:01	2700.64	19.15	4.42	780.96	--	--	0.63	196.52
Variance 0			0.00	-0.00	-3.45			-0.15	-1.68
Variance 1			0.03	0.00	0.70			-0.09	1.04
Variance 2			0.14	-0.00	1.08			-0.05	-1.58

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-22 14:23:12

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	17 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamont's 2020we	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.5608782 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	3.90 ft	Total Volume Pumped	24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:00:49	10801.47	18.52	6.15	549.47	6.17	3.93	0.96	136.38
Last 5	14:05:49	11101.47	18.50	6.16	550.00	3.33	3.91	1.13	134.48
Last 5	14:10:49	11401.47	18.48	6.16	551.01	4.88	3.94	0.87	134.46
Last 5	14:15:49	11701.47	18.44	6.16	549.99	3.24	3.95	0.84	133.94
Last 5	14:20:49	12001.47	18.48	6.16	549.16	2.90	3.96	0.89	131.63
Variance 0			-0.02	0.01	1.01			-0.26	-0.03
Variance 1			-0.03	-0.00	-1.02			-0.02	-0.52
Variance 2			0.03	-0.01	-0.82			0.05	-2.31

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-22 11:12:08

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Folder Associates	Tubing Type	poly
Project Name	Plant Branch Groundwater	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	48.00 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	43.00 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	118 mL/min
Well diameter	2 in	Total System Volume	0.6992443 L
Well Total Depth	48.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	36.18 ft	Total Volume Pumped	4.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:50:19	1200.02	18.96	5.84	840.95	0.68	36.78	1.78	-17.78
Last 5	10:55:19	1500.02	19.05	5.86	840.79	0.45	36.75	2.03	-21.11
Last 5	11:00:19	1800.28	19.00	5.86	845.74	0.20	36.77	1.35	-32.10
Last 5	11:05:19	2100.28	18.92	5.87	846.23	0.17	36.77	1.27	-36.23
Last 5	11:10:19	2400.28	18.96	5.87	847.77	0.28	36.78	1.24	-27.00
Variance 0			-0.05	0.01	4.94			-0.68	-10.99
Variance 1			-0.08	0.00	0.49			-0.08	-4.13
Variance 2			0.04	0.00	1.54			-0.03	9.23

Notes

Grab Samples

FIELD DATA FORMS

June 2017

Low-Flow

Date:	6/13/2017 10:08
Operator Name:	William Ballow
Pump Model/Type:	QED
Company Name:	Golder Associates
Tubing Type:	Teflon
Project Name:	Plant Branch
Site Name:	Default Site
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	0.170in
Tubing Length:	59 ft
Sonde SN:	378563
Turbidity Make/Model:	Lamotte 2020we
Pump placement from TOC:	56.01 ft
Well ID:	BRGWA-12S
Well diameter:	2 in
Well Total Depth:	61.01 ft
Screen Length:	10 ft
Depth to Water:	50.76 ft
Final Pumping Rate:	150 mL/min
Total System Volume:	0.7033419 L
Calculated Sample Rate:	300 sec
Stabilization Drawdown:	0 in
Total Volume Pumped:	10.5 L

Time	pH	ORP	Conducti	DO	Tempera	Turbidity	DTW
300.152254	6.23	148	72.9	7.74	20.91	1.28	51.09
600.028234	6.1	127.8	72.9	7.85	20.49	0.98	51.11
900.021326	6.1	144.4	73.2	7.91	20.5	0.8	51.12
1200.022152	6.04	144.3	63.8	7.93	20.48	1	51.11
1500.831505	6.07	111.9	73.3	7.9	20.54	0.74	51.11
1800.828299	6.07	133	73.2	7.85	20.61	0.67	51.11
2100.828855	6.05	109.5	49.1	7.87	20.66	0.64	51.1
2400.829609	6.06	146.1	57.7	7.85	20.74	1.27	51.13
2700.827788	6.05	104.9	73.5	7.87	20.82	1.76	51.12
3000.828743	6.05	190.1	74	7.86	20.84	0.92	51.14
3300.828041	6.02	178	69.9	7.87	20.78	1.4	51.14
3600.828934	6.03	137.9	74.4	7.82	20.74	0.74	51.16
3900.828548	6.03	193.9	74.4	7.87	20.92	0.44	51.15
4200.829074	6.03	200	74.7	7.87	20.86	0.48	51.12

Product Name: Low-Flow System

Date: 2017-06-13 11:19:57

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Teflon
Project Name	Plant Branch	Tubing Diameter	0.170 in
Site Name	Default Site	Tubing Length	78.5 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	75.54 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.7903787 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	50.63 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:58:40	1200.31	21.22	6.34	187.76	0.44	53.77	1.65	-17.83
Last 5	11:03:40	1500.31	21.21	6.38	185.96	0.95	54.34	1.36	-3.31
Last 5	11:08:40	1800.31	21.10	6.41	182.96	0.20	55.02	1.20	16.65
Last 5	11:13:40	2100.31	21.08	6.41	180.09	0.51	55.96	1.11	35.18
Last 5	11:18:40	2400.31	21.17	6.42	177.16	0.60	56.61	1.08	43.92
Variance 0			-0.11	0.03	-3.00			-0.16	19.95
Variance 1			-0.02	0.00	-2.87			-0.09	18.54
Variance 2			0.10	0.00	-2.93			-0.03	8.74

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-13 11:11:43

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Teflon
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	42.57 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.6542443 L
Well Total Depth	47.57 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.99 in
Depth to Water	35.50 ft	Total Volume Pumped	5.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:49:51	2100.02	24.52	5.85	159.12	2.03	36.21	1.77	-48.16
Last 5	10:54:51	2400.02	24.24	5.85	165.47	1.37	36.26	1.68	-56.45
Last 5	10:59:51	2700.02	23.42	5.86	171.52	1.54	36.34	1.51	-57.20
Last 5	11:04:51	2999.96	23.11	5.86	171.39	1.04	36.45	1.42	-61.63
Last 5	11:09:51	3299.96	22.89	5.87	173.81	1.26	36.49	1.36	-60.85
Variance 0			-0.82	0.01	6.05			-0.17	-0.75
Variance 1			-0.32	0.00	-0.13			-0.08	-4.43
Variance 2			-0.21	0.00	2.42			-0.06	0.78

Notes

Grab Samples

Low-Flow

Date:	6/13/2017 13:44
Operator Name:	William Ballow
Pump Model/Type:	QED
Company Name:	Golder Associates
Tubing Type:	Teflon
Project Name:	Plant Branch
Site Name:	Default Site
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	0.170in
Tubing Length:	22.5 ft
Sonde SN:	378563
Turbidity Make/Model:	Lamotte 2020we
Pump placement from TOC:	19.41 ft
Well ID:	BRGWC-25I
Well diameter:	2 in
Well Total Depth:	24.41 ft
Screen Length:	10 ft
Depth to Water:	8.00 ft
Final Pumping Rate:	100 mL/min
Total System Volume:	0.540427 L
Calculated Sample Rate:	300 sec
Stabilization Drawdown:	0 in
Total Volume Pumped:	8.2 L

Time	pH	ORP	Conductivi	DO	Temperatu	Turbidity	DTW
300.022792	5.98	8.1	646.9	6.38	26.5	22.1	8.02
600.020007	5.99	63.7	633.1	2.48	22.57	117	8.05
900.020475	5.99	65.6	634.7	1.82	21.55	104.2	8.01
1200.733335	5.98	71.2	627.4	1.65	21.28	47	8.01
1500.733619	5.97	56.6	626.4	1.57	21.01	25.3	8.02
1800.733455	5.97	49.4	626.7	1.47	20.83	21.2	8.01
2100.732744	5.97	57.6	626.8	1.37	20.74	14	8.02
2400.733028	5.97	52.1	626.8	1.28	20.73	14.2	8.03
2700.733567	5.97	45.5	625	1.12	20.8	9.98	8.03
3000.732618	5.97	50	623.6	1.02	20.82	9.12	8.02
3300.733824	5.97	41	622.6	0.95	20.98	7.93	8.02
3600.733907	5.97	52.2	621.7	0.91	21.23	6.51	8.02
3900.73429	5.97	46	620.8	0.86	21.27	5.78	8.02
4200.73342	5.96	51.5	621.2	0.83	21.42	4.91	8.03
4500.733387	5.96	52.3	620.9	0.85	22.17	4.55	8.01
4800.553268	5.96	50.2	620.5	0.9	22.55	4.6	8.02

Low-Flow

Date:	6/13/2017 15:21
Operator Name:	William Ballow
Pump Model/Type:	QED
Company Name:	Golder Associates
Tubing Type:	Teflon
Project Name:	Plant Branch
Site Name:	Default Site
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	0.170in
Tubing Length:	31.5 ft
Sonde SN:	378563
Turbidity Make/Model:	Lamotte 2020we
Pump placement from TOC:	28.41 ft
Well ID:	BRGWC-27I
Well diameter:	2 in
Well Total Depth:	33.41 ft
Screen Length:	10 ft
Depth to Water:	3.14 ft
Final Pumping Rate:	150 mL/min
Total System Volume:	0.5805978 L
Calculated Sample Rate:	300 sec
Stabilization Drawdown:	0 in
Total Volume Pumped:	5.3 L

Time	pH	ORP	Conductivit	DO	Temperatu	Turbidity	DTW
300.023028	5.57	51.2	488.5	1.99	23.24	12.2	3.15
600.02182	5.56	81.9	484	1.51	24.32	2.43	3.15
1200.021442	5.57	77.1	477.5	0.82	24.14	2.15	3.15
1500.022022	5.57	74.1	477.8	0.74	24.17	2.39	3.15
1800.022198	5.57	87.1	477.6	0.66	24.28	1.37	3.15
2100.021856	5.57	104.7	476	0.61	24.59	1.8	3.15

Product Name: Low-Flow System

Date: 2017-06-14 11:41:31

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Teflon
Project Name	Plant Branch	Tubing Diameter	0.170 in
Site Name	Default Site	Tubing Length	21.5 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	18.63 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5359636 L
Well Total Depth	23.63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	9.25 ft	Total Volume Pumped	6.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:19:54	600.78	21.11	4.21	874.38	0.75	9.38	0.75	132.82
Last 5	11:24:54	900.77	20.92	4.40	867.38	0.94	9.34	0.46	121.59
Last 5	11:29:54	1200.77	20.83	4.44	865.14	1.01	9.31	0.38	114.41
Last 5	11:34:54	1500.77	20.83	4.45	861.11	0.92	9.30	0.38	116.50
Last 5	11:39:54	1800.77	20.78	4.45	871.67	0.90	9.31	0.45	104.17
Variance 0			-0.10	0.04	-2.24			-0.08	-7.18
Variance 1			0.00	0.02	-4.03			0.00	2.09
Variance 2			-0.04	0.00	10.55			0.07	-12.33

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-14 14:55:29

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Teflon
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339100		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	17.35 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.5426587 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.1 in
Depth to Water	4.32 ft	Total Volume Pumped	6.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:34:44	2401.06	22.84	6.17	641.63	4.93	4.44	1.24	28.55
Last 5	14:39:44	2701.06	22.71	6.17	640.49	3.31	4.44	1.09	35.92
Last 5	14:44:44	3001.06	22.83	6.17	642.11	1.99	4.42	0.97	39.55
Last 5	14:49:44	3301.06	22.86	6.16	640.11	1.56	4.42	0.88	44.74
Last 5	14:54:44	3601.06	22.77	6.16	638.39	2.22	4.42	0.85	47.01
Variance 0			0.11	-0.00	1.62			-0.13	3.63
Variance 1			0.03	-0.01	-2.00			-0.08	5.19
Variance 2			-0.09	0.00	-1.72			-0.03	2.27

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-14 13:06:50

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Teflon
Project Name	Plant Branch	Tubing Diameter	0.170 in
Site Name	Default Site	Tubing Length	36 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.6006832 L
Well Total Depth	48.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	34.64 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:45:29	1200.02	21.81	5.72	828.63	2.96	35.14	2.61	67.00
Last 5	12:50:29	1500.42	22.04	5.76	830.54	1.71	35.15	2.16	58.81
Last 5	12:55:29	1800.42	22.06	5.80	831.73	1.63	35.14	1.77	47.84
Last 5	13:00:30	2101.42	22.23	5.82	833.24	1.74	35.16	1.64	69.31
Last 5	13:05:30	2401.42	22.66	5.83	835.39	1.01	35.16	1.62	42.41
Variance 0			0.02	0.04	1.19			-0.39	-10.96
Variance 1			0.17	0.02	1.51			-0.14	21.47
Variance 2			0.43	0.01	2.15			-0.02	-26.90

Notes

Grab Samples

FIELD DATA FORMS

September 2017

Product Name: Low-Flow System

Date: 2017-09-26 15:35:45

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Dedicated Bp QED
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	53 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	332462		
Turbidity Make/Model	Lamotte	Pump placement from TOC	53 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	350 mL/min
Well diameter	2 in	Total System Volume	0.7215614 L
Well Total Depth	58 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.08 in
Depth to Water	51.31 ft	Total Volume Pumped	15.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:05:56	1800.02	22.19	5.87	82.45	0.55	52.15	7.04	632.54
Last 5	15:10:56	2100.02	22.39	5.87	82.75	0.47	52.15	7.07	634.00
Last 5	15:15:56	2400.02	22.60	5.87	82.63	0.47	52.15	7.04	635.71
Last 5	15:20:57	2701.02	22.27	5.86	82.55	0.59	52.15	7.06	639.93
Last 5	15:26:03	3007.03	22.64	5.85	82.68	0.55	52.15	7.09	639.89
Variance 0			0.22	-0.00	-0.12			-0.03	1.71
Variance 1			-0.33	-0.01	-0.08			0.02	4.22
Variance 2			0.37	-0.01	0.13			0.03	-0.03

Notes

Sampled through 3 well volume

Sampled BRGWA-12S by purging 3 well volume. Sample time 15:25 on 9/26/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-08-31 15:42:31

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Dedicated BP QED
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	72.6 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	354295		
Turbidity Make/Model	LaMotte	Pump placement from TOC	72.6 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.8090445 L
Well Total Depth	77.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	113.16 in
Depth to Water	51 ft	Total Volume Pumped	17.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:13:57	2101.31	22.31	6.40	188.40	0.86	59.95	2.63	1165.39
Last 5	15:18:57	2401.31	21.93	6.41	188.27	1.13	60.05	2.83	1165.86
Last 5	15:23:57	2701.31	21.98	6.42	188.05	0.52	60.25	3.07	1164.25
Last 5	15:28:57	3001.31	22.34	6.42	188.21	0.46	60.32	3.14	1163.27
Last 5	15:33:57	3301.31	22.91	6.42	188.19	0.43	60.43	3.17	1162.29
Variance 0			0.04	0.01	-0.23			0.24	-1.61
Variance 1			0.36	-0.00	0.17			0.07	-0.98
Variance 2			0.57	0.00	-0.03			0.03	-0.98

Notes

Sampled BRGWA-12I at 15:35 on 9/26/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-26 13:32:40

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED Dedicated Pump
Company Name	Golder Associates	Tubing Type	Teflon Lined
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.685854 L
Well Total Depth	47.57 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	35.84 ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:08:11	2100.02	23.09	5.79	197.01	0.59	37.17	2.03	430.80
Last 5	13:13:11	2400.02	23.22	5.80	202.22	1.22	37.20	1.93	451.25
Last 5	13:18:11	2700.02	23.34	5.80	212.84	0.27	37.13	1.70	442.32
Last 5	13:23:11	3000.02	24.43	5.81	218.77	0.73	37.14	1.68	464.53
Last 5	13:28:11	3300.02	24.42	5.82	223.31	0.56	37.07	1.59	465.64
Variance 0			0.12	0.00	10.62			-0.23	-8.93
Variance 1			1.08	0.01	5.93			-0.02	22.21
Variance 2			-0.01	0.01	4.54			-0.09	1.11

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-27 09:55:39

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Dedicated BP QED
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	19.41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	354295		
Turbidity Make/Model	LaMotte	Pump placement from TOC	19.41 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-25I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.571635 L
Well Total Depth	24.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	8.49 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:28:13	300.13	20.64	5.89	672.95	3.88	8.51	0.34	1067.98
Last 5	09:33:13	600.03	20.64	5.87	675.87	3.29	8.53	0.27	1077.08
Last 5	09:38:13	900.02	20.67	5.86	676.55	3.05	8.54	0.21	1082.45
Last 5	09:43:13	1200.02	20.73	5.86	676.57	2.33	8.53	0.16	1085.80
Last 5	09:48:13	1500.02	20.73	5.85	676.98	1.86	8.54	0.13	1087.09
Variance 0			0.03	-0.01	0.68			-0.06	5.37
Variance 1			0.06	-0.01	0.02			-0.05	3.35
Variance 2			0.01	-0.00	0.41			-0.03	1.29

Notes

Sampled BRGWA-25I at 0948

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-27 10:29:01

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Dedicated Bp QED
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	332462		
Turbidity Make/Model	Lamotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6099758 L
Well Total Depth	33.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	3.37 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:04:46	300.05	23.03	5.38	525.91	0.43	3.25	0.89	371.24
Last 5	10:09:46	600.02	22.35	5.45	525.18	0.53	3.30	0.34	445.13
Last 5	10:14:46	900.24	22.18	5.49	526.33	0.60	3.30	0.32	470.44
Last 5	10:19:46	1200.24	22.16	5.50	527.98	0.66	3.30	0.26	484.57
Last 5	10:24:46	1500.24	22.24	5.53	527.94	0.75	3.30	0.20	494.36
Variance 0			-0.17	0.04	1.15			-0.02	25.31
Variance 1			-0.02	0.01	1.65			-0.06	14.13
Variance 2			0.09	0.03	-0.04			-0.06	9.79

Notes

Sampled BRGWC-27I at 10:25 on 9/27/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-27 12:21:50

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Dedicated BP QED
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	18.63 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	354295		
Turbidity Make/Model	LaMotte	Pump placement from TOC	18.63 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5681536 L
Well Total Depth	23.63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	9.64 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:57:49	300.10	22.58	4.34	743.78	0.21	9.71	0.08	1157.26
Last 5	12:02:49	600.02	22.69	4.33	743.79	0.15	9.72	0.07	1158.77
Last 5	12:07:49	900.02	22.80	4.33	743.50	0.17	9.70	0.06	1160.19
Last 5	12:12:49	1200.02	22.84	4.33	743.98	0.14	9.73	0.06	1163.74
Last 5	12:17:49	1500.02	22.83	4.33	744.06	0.13	9.71	0.05	1165.49
Variance 0			0.11	-0.00	-0.29			-0.01	1.42
Variance 1			0.04	-0.01	0.48			-0.00	3.55
Variance 2			-0.02	-0.00	0.08			-0.00	1.75

Notes

Sampled BRGWC-29I at 1218

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-27 11:58:58

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Dedicated Bp QED
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	17 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	332462		
Turbidity Make/Model	Lamotte	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5608782 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	3.80 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:35:20	300.03	23.09	6.07	614.03	15.20	4.10	0.82	193.92
Last 5	11:40:20	600.02	22.80	6.11	611.97	4.90	4.10	0.56	190.20
Last 5	11:45:20	900.02	22.56	6.14	610.90	2.47	4.10	0.33	192.26
Last 5	11:50:20	1200.08	22.47	6.15	611.72	1.74	4.10	0.22	197.95
Last 5	11:55:20	1500.04	22.50	6.16	610.84	1.44	4.10	0.19	203.32
Variance 0			-0.24	0.03	-1.08			-0.23	2.06
Variance 1			-0.09	0.02	0.82			-0.11	5.69
Variance 2			0.03	0.01	-0.88			-0.03	5.38

Notes

Sampled BRGWC-30I at 11:55 on 9/27/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-27 14:23:02

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED Dedicated Pump
Company Name	Golder Associates	Tubing Type	Teflon Lined
Project Name	Plant Branch	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	43.00 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	378563		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	43.99 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.6769272 L
Well Total Depth	48.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	34.4 ft	Total Volume Pumped	5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:58:39	900.03	22.08	5.84	759.81	1.19	35.31	1.18	326.43
Last 5	14:03:39	1200.08	22.03	5.86	762.34	0.40	35.30	0.96	358.84
Last 5	14:08:39	1500.04	21.84	5.87	761.71	0.39	35.34	0.83	289.50
Last 5	14:13:39	1800.02	21.73	5.87	762.94	0.57	35.34	0.75	248.76
Last 5	14:18:39	2100.02	21.97	5.87	763.50	0.40	35.29	0.71	261.40
Variance 0			-0.20	0.01	-0.63			-0.13	-69.33
Variance 1			-0.11	0.00	1.24			-0.08	-40.75
Variance 2			0.24	-0.00	0.55			-0.04	12.64

Notes

Grab Samples

FIELD DATA FORMS

February 2018

Product Name: Low-Flow System

Date: 2018-02-14 09:08:50

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Polyethylene Bonded
Project Name	1666254	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	540534		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	56 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	300 mL/min
Well diameter	2 in	Total System Volume	1.035206 L
Well Total Depth	61.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.97 in
Depth to Water	52.12 ft	Total Volume Pumped	17.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	08:46:04	2400.63	18.34	6.00	81.00	1.21	52.79	7.03	130.77
Last 5	08:51:04	2700.63	18.34	6.01	81.23	1.09	52.81	7.03	129.71
Last 5	08:56:04	3000.63	18.30	6.00	81.24	1.85	52.78	7.02	129.91
Last 5	09:01:04	3300.63	18.28	6.00	81.12	1.24	52.84	7.00	129.33
Last 5	09:06:04	3600.63	18.34	5.99	81.64	1.24	52.81	7.02	129.64
Variance 0			-0.04	-0.01	0.00			-0.01	0.21
Variance 1			-0.03	0.00	-0.12			-0.02	-0.58
Variance 2			0.06	-0.01	0.52			0.02	0.31

Notes

Begin purge at 0804

Change purge rate to 299 ml/min at 0816. Sample at 0906

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 11:22:45

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Polyethylene Bonded
Project Name	1666254	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	77 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	540534		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	76 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	1.22826 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	88.68 in
Depth to Water	51.83 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:00:17	5999.74	16.56	6.40	165.48	1.77	59.44	2.30	69.46
Last 5	11:05:17	6299.74	16.49	6.43	167.54	1.01	59.56	2.44	70.07
Last 5	11:10:17	6599.74	16.61	6.45	169.79	1.28	59.61	2.64	70.76
Last 5	11:15:17	6899.74	16.59	6.47	170.70	1.44	59.80	2.79	71.29
Last 5	11:20:17	7199.74	16.63	6.48	171.33	1.62	59.88	2.88	71.44
Variance 0			0.12	0.02	2.26			0.20	0.69
Variance 1			-0.03	0.02	0.90			0.15	0.52
Variance 2			0.04	0.01	0.63			0.09	0.15

Notes

Sample at 1120

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 12:07:45

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder	Tubing Type	bonded
Project Name	Plant Branch	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	47.57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	42.57 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	114 mL/min
Well diameter	2 in	Total System Volume	0.9441804 L
Well Total Depth	47.57 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.59 in
Depth to Water	37.63 ft	Total Volume Pumped	18.81 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:46:01	8705.40	17.76	5.83	262.17	0.26	39.22	1.83	107.67
Last 5	11:51:01	9005.41	17.65	5.83	263.21	0.17	39.22	1.83	108.98
Last 5	11:56:01	9305.41	17.73	5.83	263.43	0.05	39.22	1.82	110.14
Last 5	12:01:01	9605.41	17.84	5.83	263.94	0.09	39.22	1.83	111.28
Last 5	12:06:04	9908.41	17.98	5.83	264.32	0.00	39.22	1.80	112.88
Variance 0			0.07	-0.00	0.22			-0.01	1.16
Variance 1			0.11	-0.00	0.51			0.01	1.15
Variance 2			0.14	-0.00	0.38			-0.03	1.59

Notes

Purged three well volumes prior to sample

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 13:20:21

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Polyethylene Bonded
Project Name	1666254	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	22 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	540534		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	20 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6973601 L
Well Total Depth	24.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.56 in
Depth to Water	7.66 ft	Total Volume Pumped	6.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:58:11	900.93	16.20	5.94	564.77	25.60	7.82	0.40	91.12
Last 5	13:03:11	1200.93	16.22	5.94	567.19	13.80	7.84	0.24	91.76
Last 5	13:08:11	1500.93	16.04	5.94	569.89	4.06	7.86	0.19	91.92
Last 5	13:13:11	1800.93	16.11	5.94	570.60	4.14	7.95	0.15	91.29
Last 5	13:18:11	2100.93	16.20	5.94	571.97	3.95	7.79	0.13	90.59
Variance 0			-0.18	0.00	2.70			-0.05	0.17
Variance 1			0.07	-0.00	0.71			-0.04	-0.63
Variance 2			0.09	0.00	1.37			-0.02	-0.71

Notes

Sample at 1318

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 13:22:53

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder	Tubing Type	bonded
Project Name	Plant Branch	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	33.41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	28.41 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8074977 L
Well Total Depth	33.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.1 in
Depth to Water	3.68 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:05:33	300.03	17.57	5.81	583.78	2.32	3.84	2.33	233.73
Last 5	13:10:33	600.02	17.79	5.85	563.87	1.76	3.75	1.49	236.46
Last 5	13:15:33	900.02	17.92	5.84	562.33	2.29	3.78	1.55	235.09
Last 5	13:20:33	1200.02	18.06	5.83	550.90	1.36	3.78	1.35	234.93
Last 5									
Variance 0			0.23	0.04	-19.90			-0.84	2.73
Variance 1			0.13	-0.01	-1.54			0.06	-1.36
Variance 2			0.13	-0.01	-11.44			-0.20	-0.16

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 14:09:47

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Polyethylene Bonded
Project Name	1666254	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	540534		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6780546 L
Well Total Depth	23.63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.04 in
Depth to Water	9.04 ft	Total Volume Pumped	5.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:45:59	300.03	17.72	3.75	665.31	0.44	9.17	2.34	267.87
Last 5	13:50:59	600.02	18.18	4.19	615.70	0.42	9.12	0.63	216.36
Last 5	13:55:59	900.05	18.29	4.35	607.72	0.55	9.19	0.29	193.16
Last 5	14:00:59	1200.04	18.37	4.40	608.17	0.49	9.15	0.19	184.66
Last 5	14:05:59	1500.02	18.34	4.42	608.67	0.26	9.21	0.14	181.66
Variance 0			0.11	0.16	-7.98			-0.34	-23.20
Variance 1			0.08	0.05	0.45			-0.10	-8.50
Variance 2			-0.03	0.02	0.49			-0.05	-3.01

Notes

Begin at 1340
Sample at 1406

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 15:05:52

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Polyethylene Bonded
Project Name	1666254	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	540534		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6780546 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.28 in
Depth to Water	4.06 ft	Total Volume Pumped	5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:43:46	300.09	16.08	6.13	566.60	10.64	4.23	2.02	21.13
Last 5	14:48:46	600.02	16.23	6.18	564.75	1.86	4.26	1.06	62.51
Last 5	14:53:46	900.02	16.42	6.21	565.70	2.27	4.20	0.69	71.30
Last 5	14:58:46	1200.02	16.48	6.24	566.46	1.73	4.24	0.51	74.52
Last 5	15:03:46	1500.02	16.60	6.24	567.04	2.57	4.25	0.42	76.60
Variance 0			0.18	0.03	0.96			-0.37	8.80
Variance 1			0.06	0.02	0.76			-0.18	3.22
Variance 2			0.12	0.00	0.58			-0.09	2.07

Notes

Begin at 1436
Sample at 1503

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-14 15:10:53

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder	Tubing Type	bonded
Project Name	Plant Branch	Tubing Diameter	0.25 in
Site Name	Plant Branch	Tubing Length	48.00 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	43.00 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.9483311 L
Well Total Depth	48.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.73 in
Depth to Water	35.39 ft	Total Volume Pumped	4.73 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:48:09	1200.02	17.83	6.00	838.77	0.89	36.12	4.10	213.15
Last 5	14:53:09	1500.02	17.88	6.01	844.30	0.64	36.14	3.69	215.77
Last 5	14:58:09	1800.02	17.93	6.01	842.69	0.47	36.08	2.62	209.32
Last 5	15:03:09	2100.02	17.90	6.01	844.73	0.43	36.08	2.56	198.29
Last 5	15:08:09	2400.02	18.01	6.01	843.32	0.53	36.12	2.83	189.20
Variance 0			0.05	0.00	-1.62			-1.07	-6.45
Variance 1			-0.03	-0.00	2.04			-0.06	-11.03
Variance 2			0.11	0.00	-1.41			0.28	-9.09

Notes

Grab Samples

FIELD DATA FORMS

March 2018

Product Name: Low-Flow System

Date: 2018-03-06 13:27:02

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	55 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	PZ-45	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	10.74 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10	+/- 10
Last 5	13:04:15	600.02	17.80	6.11	558.67	8.65	10.92	0.49	76.83
Last 5	13:09:15	900.02	17.94	6.13	554.98	6.58	10.92	0.41	70.14
Last 5	13:14:15	1200.01	18.17	6.15	547.49	5.85	10.92	0.37	65.41
Last 5	13:19:15	1499.99	18.17	6.15	538.62	5.74	10.92	0.34	62.84
Last 5	13:24:15	1799.99	18.17	6.15	534.99	4.88	10.92	0.33	60.58
Variance 0			0.22	0.02	-7.49			-0.04	-4.73
Variance 1			0.00	0.00	-8.87			-0.02	-2.56
Variance 2			0.00	-0.00	-3.64			-0.01	-2.26

Notes

Sampled PZ-45 @ 1325, extra radium here

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-06 12:45:15

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	92 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	92 ft

Well Information:		Pumping Information:	
Well ID	PZ-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.5006349 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.2 in
Depth to Water	25.55 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10	+/- 10
Last 5	12:21:49	600.02	14.87	6.04	2334.22	2.13	25.89	0.87	100.74
Last 5	12:26:49	900.02	14.80	6.03	2341.95	1.31	25.89	0.76	100.66
Last 5	12:31:49	1200.02	14.80	6.01	2348.61	1.80	25.90	0.62	100.80
Last 5	12:36:49	1500.02	14.88	6.00	2339.49	1.51	25.90	0.62	101.12
Last 5	12:41:49	1800.02	14.89	6.00	2348.69	1.63	25.90	0.56	101.08
Variance 0			-0.00	-0.02	6.66			-0.14	0.15
Variance 1			0.08	-0.01	-9.12			-0.00	0.32
Variance 2			0.02	-0.00	9.20			-0.05	-0.04

Notes

Began purging at 1211
Began sampling at 1245

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-15 13:59:12

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	64 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	LaMotte	Pump placement from TOC	64 ft

Well Information:		Pumping Information:	
Well ID	PZ-50	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.5006591 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	37.72 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:36:24	599.94	20.94	5.51	2324.93	7.49	37.77	0.57	112.64
Last 5	13:41:24	899.94	20.76	5.35	2334.39	5.41	37.77	0.46	110.43
Last 5	13:46:24	1199.94	20.88	5.29	2331.87	4.87	37.77	0.41	108.73
Last 5	13:51:24	1499.94	20.52	5.27	2341.50	4.59	37.77	0.36	107.61
Last 5	13:56:25	1800.94	20.85	5.26	2356.16	4.42	37.77	0.33	106.33
Variance 0			0.12	-0.05	-2.53			-0.04	-1.70
Variance 1			-0.36	-0.03	9.63			-0.05	-1.12
Variance 2			0.33	-0.01	14.66			-0.03	-1.28

Notes

Sampled PZ-50 at 1355, 3-15-18

Grab Samples

FIELD DATA FORMS

May 2018

Product Name: Low-Flow System

Date: 2018-05-01 15:33:44

Project Information:		Pump Information:	
Operator Name	C Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	55.5 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020e	Pump placement from TOC	55.5 ft

Well Information:		Pumping Information:	
Well ID	PZ-45	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.33772 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	10.65 ft	Total Volume Pumped	3.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:10:23	900.02	24.69	6.23	516.12	12.20	10.85	0.25	-5.37
Last 5	15:15:23	1200.01	24.57	6.19	512.72	10.39	10.85	0.22	-7.64
Last 5	15:20:23	1500.01	24.82	6.17	510.72	7.58	10.85	0.22	-9.67
Last 5	15:25:23	1800.00	24.96	6.15	503.93	7.74	10.85	0.18	-11.51
Last 5	15:30:23	2100.00	25.15	6.14	499.12	4.36	10.85	0.18	-12.77
Variance 0			0.25	-0.03	-2.00			0.00	-2.03
Variance 1			0.14	-0.02	-6.79			-0.04	-1.84
Variance 2			0.18	-0.02	-4.81			0.00	-1.26

Notes

PZ-45 sampled at 15:40

Grab Samples

Product Name: Low-Flow System

Date: 2018-05-01 12:37:26

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	92 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440275		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	92 ft

Well Information:		Pumping Information:	
Well ID	PZ-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.5006349 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	25.15 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:14:00	1500.76	22.99	5.88	2294.05	17.50	25.55	0.33	96.25
Last 5	12:19:00	1800.76	23.06	5.87	2286.50	8.05	25.55	0.31	96.23
Last 5	12:24:00	2100.75	23.12	5.87	2321.61	7.22	25.55	0.32	96.62
Last 5	12:29:00	2400.75	23.08	5.86	2318.14	6.79	25.55	0.28	96.48
Last 5	12:34:00	2700.76	23.12	5.85	2322.92	4.88	25.55	0.26	96.54
Variance 0			0.06	0.00	35.11			0.01	0.38
Variance 1			-0.04	-0.02	-3.47			-0.04	-0.13
Variance 2			0.04	-0.01	4.78			-0.02	0.05

Notes

Sampled PZ-47 at 1235

Grab Samples

Product Name: Low-Flow System

Date: 2018-05-01 19:21:34

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	64 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440275		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	64 ft

Well Information:		Pumping Information:	
Well ID	PZ-50	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5006591 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	37.95 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	19:00:12	3002.03	21.51	5.60	2431.28	3.41	38.11	0.05	-166.08
Last 5	19:05:12	3302.03	21.44	5.53	2430.52	2.39	38.11	0.04	-155.42
Last 5	19:10:14	3604.03	21.38	5.46	2435.55	2.53	38.11	0.04	-144.09
Last 5	19:15:14	3904.92	21.24	5.41	2439.04	2.39	38.11	0.04	-132.76
Last 5	19:20:15	4205.92	21.24	5.38	2444.57	1.99	38.11	0.04	-122.44
Variance 0			-0.07	-0.06	5.03			-0.00	11.33
Variance 1			-0.13	-0.05	3.50			0.00	11.33
Variance 2			-0.01	-0.04	5.53			0.00	10.32

Notes

Sampled PZ-50 at 1920

Grab Samples

FIELD DATA FORMS

June 2018

Product Name: Low-Flow System

Date: 2018-06-26 11:54:59

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	bonded poly
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	61.01 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538245		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	56.01 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	1.073913 L
Well Total Depth	61.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.03 in
Depth to Water	52.77 ft	Total Volume Pumped	15.61 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:33:34	2699.96	21.14	5.88	88.18	0.62	52.80	7.37	251.28
Last 5	11:38:34	2999.96	21.37	5.86	89.92	0.67	52.80	7.45	255.14
Last 5	11:43:34	3299.96	21.36	5.86	89.90	0.88	52.80	7.38	257.34
Last 5	11:48:34	3599.96	21.45	5.84	89.85	0.30	52.80	7.39	264.19
Last 5	11:53:34	3899.96	21.19	5.86	90.42	0.27	52.80	7.47	269.59
Variance 0			-0.00	0.00	-0.02			-0.06	2.20
Variance 1			0.09	-0.02	-0.05			0.00	6.85
Variance 2			-0.26	0.01	0.58			0.08	5.40

Notes

Purged three well volumes

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-26 13:18:03

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	bonded poly
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	80.54 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538245		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	75.54 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	1.262431 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.62 in
Depth to Water	52.46 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:55:06	2400.39	23.06	6.19	178.96	0.23	57.28	0.84	76.22
Last 5	13:00:12	2706.39	23.59	6.20	176.97	0.67	57.60	1.00	97.65
Last 5	13:05:12	3006.39	24.08	6.20	174.93	0.18	57.85	1.06	113.51
Last 5	13:10:12	3306.39	24.32	6.20	172.85	0.49	57.98	1.15	130.10
Last 5	13:15:12	3606.39	24.39	6.20	171.22	0.32	58.05	1.23	143.91
Variance 0			0.49	0.00	-2.04			0.06	15.86
Variance 1			0.24	0.00	-2.08			0.09	16.59
Variance 2			0.07	0.00	-1.63			0.08	13.81

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-26 15:39:19

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	bonded poly
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	43.8 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538245		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	39.80 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-23S	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.9077896 L
Well Total Depth	43.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.76 in
Depth to Water	38.35 ft	Total Volume Pumped	10.33 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:18:03	3900.18	25.46	5.75	279.63	0.41	39.25	1.64	144.00
Last 5	15:23:03	4200.18	25.50	5.75	276.10	0.99	39.25	1.69	148.18
Last 5	15:28:03	4500.18	25.41	5.73	277.23	0.42	39.25	1.83	151.19
Last 5	15:33:03	4800.18	25.41	5.73	276.09	0.25	39.25	1.91	152.55
Last 5	15:38:03	5100.18	25.55	5.73	273.59	0.27	39.25	1.98	154.88
Variance 0			-0.09	-0.02	1.13			0.15	3.01
Variance 1			0.00	-0.00	-1.14			0.08	1.36
Variance 2			0.14	0.00	-2.49			0.06	2.33

Notes

Purge three well volumes

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-26 15:23:01

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Bonded Polyethylene
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	541717		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	20 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7263182 L
Well Total Depth	24.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.2 in
Depth to Water	8.91 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:00:02	1500.02	20.50	5.86	512.99	7.44	9.08	1.61	78.25
Last 5	15:05:02	1800.02	20.57	5.86	558.11	6.86	9.11	1.78	78.11
Last 5	15:10:02	2100.02	20.68	5.86	560.74	4.78	9.11	1.39	77.43
Last 5	15:15:02	2400.02	20.66	5.84	560.99	4.22	9.10	1.24	76.03
Last 5	15:20:02	2700.02	20.32	5.87	560.89	3.08	9.11	1.23	76.06
Variance 0			0.11	0.01	2.62			-0.39	-0.68
Variance 1			-0.02	-0.02	0.25			-0.14	-1.40
Variance 2			-0.33	0.03	-0.10			-0.02	0.03

Notes

Begin purge at 1434
Sample at 1520

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-27 14:31:43

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Bonded Polyethylene
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	541717		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8035402 L
Well Total Depth	33.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.1 in
Depth to Water	5.41 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:15:02	300.12	21.73	5.42	505.34	1.07	5.49	0.51	153.51
Last 5	14:20:01	600.03	21.60	5.49	505.25	0.39	5.52	0.21	149.28
Last 5	14:25:01	900.02	21.76	5.52	503.14	0.16	5.49	0.14	144.80
Last 5	14:30:01	1200.02	21.46	5.53	501.81	0.11	5.51	0.10	140.46
Last 5									
Variance 0			-0.13	0.07	-0.09			-0.30	-4.23
Variance 1			0.15	0.03	-2.11			-0.08	-4.48
Variance 2			-0.29	0.01	-1.32			-0.03	-4.34

Notes

Begin purge at 1406
Sample at 1430

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-27 13:20:29

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Bonded Polyethylene
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	541717		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7263182 L
Well Total Depth	23.63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	9.84 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:58:27	2100.72	21.19	4.37	590.12	0.25	9.89	0.87	187.34
Last 5	13:03:27	2400.72	21.33	4.41	590.61	0.33	9.89	1.51	185.10
Last 5	13:08:27	2700.72	21.24	4.40	595.57	0.72	9.93	0.04	181.41
Last 5	13:13:27	3000.72	21.26	4.42	592.94	0.23	9.90	0.03	179.16
Last 5	13:18:27	3300.72	21.28	4.37	591.68	0.20	9.89	0.03	180.13
Variance 0			-0.09	-0.00	4.95			-1.46	-3.70
Variance 1			0.01	0.01	-2.62			-0.01	-2.25
Variance 2			0.03	-0.04	-1.26			-0.00	0.97

Notes

Begin purge at 1218
Sample at 1318

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-28 08:47:55

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	Bonded Polyethylene
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	22 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	541717		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6973601 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.23 in
Depth to Water	4.49 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	08:30:21	300.17	21.20	6.44	621.57	6.08	4.61	2.13	12.46
Last 5	08:35:21	600.02	20.68	6.31	670.01	4.26	4.66	0.37	24.13
Last 5	08:40:21	900.02	20.57	6.25	680.09	3.80	4.70	0.19	35.14
Last 5	08:45:21	1200.02	20.49	6.21	679.90	4.06	4.72	0.15	39.38
Last 5									
Variance 0			-0.52	-0.13	48.44			-1.76	11.67
Variance 1			-0.10	-0.05	10.08			-0.18	11.01
Variance 2			-0.08	-0.04	-0.19			-0.03	4.24

Notes

Begin purge at 0825
Sample at 0845

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-27 09:56:43

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	bonded poly
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538245		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.9483311 L
Well Total Depth	48.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.58 in
Depth to Water	35.86 ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:35:04	1800.02	20.04	5.82	806.23	0.60	36.48	2.85	214.35
Last 5	09:40:04	2100.03	19.97	5.83	807.37	0.26	36.48	2.70	211.88
Last 5	09:45:04	2400.02	19.94	5.83	808.03	0.24	36.48	2.45	209.22
Last 5	09:50:04	2700.02	20.00	5.83	808.18	0.29	36.44	2.34	207.15
Last 5	09:55:04	3000.02	20.11	5.83	808.18	0.03	36.44	2.29	205.64
Variance 0			-0.03	0.00	0.66			-0.25	-2.66
Variance 1			0.06	0.00	0.15			-0.10	-2.07
Variance 2			0.11	0.00	-0.01			-0.06	-1.51

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-28 11:08:16

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	pine peristaltic
Company Name	Golder Associates	Tubing Type	bonded poly
Project Name	Plant Branch	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	57.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538245		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	52.0 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-45	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.3444151 L
Well Total Depth	57.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.32 in
Depth to Water	10.80 ft	Total Volume Pumped	4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:45:47	600.53	24.19	6.17	517.64	4.88	11.11	1.08	-6.42
Last 5	10:50:47	900.54	24.16	6.16	512.10	3.91	11.12	1.26	-1.11
Last 5	10:55:47	1200.53	24.28	5.88	509.54	1.20	11.12	0.35	18.24
Last 5	11:00:47	1500.53	24.11	5.89	501.87	2.26	11.12	0.43	23.08
Last 5	11:05:47	1800.53	24.11	5.88	499.10	2.16	11.12	0.17	29.62
Variance 0			0.12	-0.28	-2.57			-0.91	19.35
Variance 1			-0.17	0.01	-7.67			0.08	4.84
Variance 2			-0.00	-0.01	-2.78			-0.25	6.54

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-27 10:22:25

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED SamplePro
Company Name	Golder Associates	Tubing Type	Bonded Polyethylene
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	95 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	541717		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	90 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	1.402009 L
Well Total Depth	95.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.61 in
Depth to Water	25.69 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:00:04	4200.63	23.09	5.90	2299.51	3.70	26.23	1.55	93.01
Last 5	10:05:04	4500.63	23.35	5.89	2180.94	2.75	26.30	1.41	94.85
Last 5	10:10:04	4800.62	23.85	5.89	2297.41	2.30	26.25	1.52	96.30
Last 5	10:15:04	5100.62	23.11	5.87	2308.92	2.18	26.27	1.48	98.95
Last 5	10:20:04	5400.62	23.16	5.87	2334.94	1.96	26.22	1.46	99.31
Variance 0			0.51	0.01	116.47			0.11	1.45
Variance 1			-0.75	-0.02	11.51			-0.04	2.65
Variance 2			0.06	-0.01	26.02			-0.02	0.36

Notes

Sampled with portable bladder pump. Begin purge at 0849.
Sample at 1020

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-28 09:57:25

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	QED SamplePro
Company Name	Golder Associates	Tubing Type	Bonded Polyethylene
Project Name	Plant Branch	Tubing Diameter	.25 in
Site Name	Plant Branch	Tubing Length	68 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	541717		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	63.5 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-50	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	1.141386 L
Well Total Depth	68.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.17 in
Depth to Water	37.77 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:35:08	900.75	22.94	5.20	2347.18	4.53	37.91	1.09	104.65
Last 5	09:40:08	1200.75	23.68	5.10	2353.95	4.07	37.91	2.68	113.23
Last 5	09:45:08	1500.75	24.15	5.04	2351.87	3.54	37.94	2.41	115.69
Last 5	09:50:08	1800.75	24.60	5.03	2349.87	3.12	37.88	2.39	117.48
Last 5	09:55:08	2100.75	24.97	5.03	2349.32	3.29	37.94	2.42	118.51
Variance 0			0.48	-0.05	-2.08			-0.27	2.46
Variance 1			0.45	-0.01	-2.00			-0.02	1.79
Variance 2			0.36	-0.00	-0.55			0.03	1.03

Notes

Begin purge at 0920
Sample at 0955

Grab Samples

FIELD DATA FORMS

August 2018

Product Name: Low-Flow System

Date: 2018-07-31 15:34:35

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254.04	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	55 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	PZ-45	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.52 in
Depth to Water	10.72 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:10:16	300.03	26.65	6.14	551.38	19.70	10.93	0.68	71.23
Last 5	15:15:16	600.02	26.12	6.12	561.29	15.70	10.93	0.42	96.60
Last 5	15:20:16	900.01	26.02	6.11	555.46	10.92	10.93	0.33	107.87
Last 5	15:25:17	1201.00	25.82	6.09	549.77	8.26	10.93	0.27	119.47
Last 5	15:30:17	1500.98	26.01	6.07	537.83	3.95	10.93	0.27	130.40
Variance 0			-0.10	-0.01	-5.84			-0.10	11.27
Variance 1			-0.20	-0.02	-5.68			-0.06	11.60
Variance 2			0.19	-0.02	-11.95			-0.00	10.93

Notes

Sampled PZ-45 at 1530

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-01 10:12:43

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254.04	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	92 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	92 ft

Well Information:		Pumping Information:	
Well ID	PZ-47	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5006349 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.36 in
Depth to Water	26.32 ft	Total Volume Pumped	7.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:50:45	2401.96	22.85	5.79	2184.44	8.15	26.85	0.39	149.12
Last 5	09:55:45	2701.95	22.94	5.79	2181.78	7.97	26.85	0.38	148.57
Last 5	10:00:45	3001.94	23.15	5.79	2190.10	6.54	26.85	0.39	149.19
Last 5	10:05:45	3301.93	23.16	5.79	2198.81	5.70	26.85	0.38	150.64
Last 5	10:10:45	3601.92	23.16	5.79	2200.55	4.18	26.85	0.36	151.29
Variance 0			0.21	-0.00	8.33			0.01	0.62
Variance 1			0.01	-0.00	8.71			-0.01	1.45
Variance 2			0.00	0.00	1.74			-0.03	0.65

Notes

Sampled PZ-47 at 1010

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-01 13:23:37

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254.04	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	64 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	64 ft

Well Information:		Pumping Information:	
Well ID	PZ-50 (LF)	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5006591 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	37.95 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:01:32	300.03	26.33	5.58	2138.53	22.90	38.00	1.11	108.44
Last 5	13:06:32	600.02	24.63	5.28	2294.98	11.80	38.00	0.44	188.32
Last 5	13:11:32	900.01	24.71	5.23	2313.95	5.72	38.00	0.33	217.57
Last 5	13:16:36	1204.00	24.99	5.22	2318.77	4.57	38.00	0.29	231.31
Last 5	13:21:36	1503.99	24.87	5.22	2309.46	3.90	38.00	0.26	240.95
Variance 0			0.09	-0.04	18.97			-0.11	29.25
Variance 1			0.28	-0.01	4.82			-0.04	13.75
Variance 2			-0.11	-0.00	-9.31			-0.03	9.64

Notes

Sampled PZ-50 using low flow purge method at 1320, 8.1.18

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-10 08:53:39

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666254.04	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	69 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	69 ft

Well Information:		Pumping Information:	
Well ID	PZ-52I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.5229762 L
Well Total Depth	73.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.2 in
Depth to Water	35.88 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:30:07	1200.00	23.23	6.28	496.12	6.85	36.23	1.13	33.59
Last 5	08:35:09	1501.99	23.21	6.28	494.78	5.87	36.23	0.94	32.96
Last 5	08:40:09	1801.98	23.15	6.28	498.32	5.36	36.23	0.81	30.50
Last 5	08:45:14	2106.97	23.13	6.28	502.56	5.05	36.23	0.65	29.24
Last 5	08:50:15	2407.96	23.12	6.28	503.21	4.86	36.23	0.21	30.12
Variance 0			-0.05	0.00	3.54			-0.13	-2.46
Variance 1			-0.03	0.00	4.24			-0.16	-1.26
Variance 2			-0.01	-0.01	0.66			-0.44	0.88

Notes

Sampled PZ-52I at 0850. WL readings reflect ft below ground surface

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-23 14:24:47

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1666154	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	71 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	71 ft

Well Information:		Pumping Information:	
Well ID	PZ-52I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5319031 L
Well Total Depth	76.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.48 in
Depth to Water	39.11 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:00:59	600.03	24.26	6.50	455.74	4.86	39.43	9.07	34.91
Last 5	14:05:59	900.03	23.92	6.63	447.68	2.99	39.43	9.50	20.71
Last 5	14:10:59	1200.03	23.79	6.70	433.09	3.07	39.45	8.92	10.18
Last 5	14:16:00	1501.03	23.71	6.74	430.09	3.05	39.60	9.00	3.21
Last 5	14:21:00	1801.03	23.70	6.75	421.03	3.20	39.65	8.84	-1.41
Variance 0			-0.13	0.07	-14.59			-0.58	-10.53
Variance 1			-0.08	0.04	-3.00			0.08	-6.97
Variance 2			-0.01	0.01	-9.07			-0.16	-4.62

Notes

Sampled PZ-52I at 1420

Grab Samples

FIELD DATA FORMS

September 2018

Product Name: Low-Flow System

Date: 2018-09-19 10:46:40

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625403	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	55 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-45	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.56 in
Depth to Water	11.87 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:24:03	300.04	26.18	6.10	503.76	3.24	12.23	0.28	-80.48
Last 5	10:29:03	600.02	25.28	5.97	497.49	4.67	12.25	0.17	-79.92
Last 5	10:34:03	900.02	25.14	5.93	487.67	7.71	12.25	0.14	-70.49
Last 5	10:39:03	1200.00	25.32	5.92	480.97	6.62	12.25	0.12	-72.90
Last 5	10:44:04	1501.00	25.32	5.90	474.84	4.79	12.25	0.11	-78.16
Variance 0			-0.14	-0.04	-9.82			-0.03	9.44
Variance 1			0.18	-0.01	-6.70			-0.01	-2.41
Variance 2			-0.00	-0.02	-6.13			-0.01	-5.26

Notes

Sampled BRGWC-45 at 1045. Extra radium here

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-19 09:28:20

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625403	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	93 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	93 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-47	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5050983 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.36 in
Depth to Water	27.24 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:05:10	1800.00	23.16	5.73	2139.22	8.89	27.76	0.34	-45.36
Last 5	09:10:10	2099.99	23.24	5.72	2140.50	7.67	27.77	0.32	-44.97
Last 5	09:15:11	2400.98	23.43	5.72	2143.83	6.44	27.77	0.32	-44.53
Last 5	09:20:11	2700.97	23.42	5.71	2150.00	5.17	27.77	0.30	-44.01
Last 5	09:25:11	3000.96	23.65	5.71	2160.84	4.81	27.77	0.29	-43.66
Variance 0			0.19	-0.01	3.34			-0.01	0.45
Variance 1			-0.01	-0.00	6.16			-0.02	0.52
Variance 2			0.23	-0.00	10.84			-0.01	0.34

Notes

Sampled BRGWC-47 at 0925. FB-1 taken here

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-19 12:13:09

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625403	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.52 in
Depth to Water	39.26 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:50:27	900.01	22.98	6.52	452.96	4.29	39.72	0.40	-76.96
Last 5	11:55:28	1201.01	22.81	6.52	460.62	2.48	39.72	0.26	-76.48
Last 5	12:00:28	1500.99	22.92	6.49	486.08	2.35	39.72	0.21	-75.51
Last 5	12:05:30	1802.99	23.00	6.48	502.44	3.53	39.72	0.17	-76.08
Last 5	12:10:32	2104.99	23.17	6.48	500.51	1.97	39.72	0.15	-75.68
Variance 0			0.11	-0.03	25.46			-0.05	0.96
Variance 1			0.08	-0.01	16.35			-0.04	-0.57
Variance 2			0.17	-0.00	-1.93			-0.02	0.41

Notes

Pale orange particulates observed in tubing and turbidity jars during purging. Sampled BRGWC-52I at 1210. FD-1 taken here

Grab Samples

FIELD DATA FORMS

October 2018

Product Name: Low-Flow System

Date: 2018-10-29 10:53:23

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166624518	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	55 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	LaMotte	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-45	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.32 in
Depth to Water	11.83 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:31:29	300.03	22.26	6.10	531.29	13.40	12.15	0.39	2.72
Last 5	10:36:29	600.02	21.86	5.96	522.18	8.13	12.18	0.19	34.32
Last 5	10:41:29	900.02	21.95	5.95	514.36	6.22	12.18	0.16	42.32
Last 5	10:46:29	1200.02	21.90	5.93	499.19	5.53	12.19	0.14	48.20
Last 5	10:51:29	1500.02	21.92	5.93	503.03	1.99	12.19	0.13	50.40
Variance 0			0.09	-0.01	-7.82			-0.03	8.00
Variance 1			-0.04	-0.02	-15.17			-0.01	5.87
Variance 2			0.01	-0.00	3.84			-0.02	2.20

Notes

Sampled BRGWC-45 at 1050. Extra rads here

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-29 09:36:44

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166624518	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	93 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	LaMotte	Pump placement from TOC	93 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-47	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5050983 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.52 in
Depth to Water	27.82 ft	Total Volume Pumped	7.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:15:16	2402.99	18.23	5.77	2210.39	15.00	28.28	0.43	47.67
Last 5	09:20:16	2702.98	18.47	5.77	2204.49	8.54	28.28	0.42	44.22
Last 5	09:25:18	3004.98	18.65	5.76	2220.82	6.66	28.28	0.40	42.76
Last 5	09:30:18	3304.98	18.90	5.77	2229.67	5.93	28.28	0.38	42.56
Last 5	09:35:18	3604.98	18.78	5.76	2220.96	4.70	28.28	0.37	42.53
Variance 0			0.18	-0.01	16.32			-0.02	-1.46
Variance 1			0.25	0.00	8.85			-0.02	-0.21
Variance 2			-0.11	-0.00	-8.71			-0.01	-0.03

Notes

Sampled BRGWC-47 at 0935. Black particulates observed in tubing during initial 10min of purge

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-29 13:03:20

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166624518	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	64 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	LaMotte	Pump placement from TOC	64 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-50	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5006591 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	38.07 ft	Total Volume Pumped	13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:41:28	2702.02	20.61	5.20	2388.84	11.20	38.21	0.19	54.42
Last 5	12:46:28	3002.02	20.57	5.20	2390.16	9.67	38.21	0.17	54.39
Last 5	12:51:29	3302.83	20.60	5.20	2389.70	7.01	38.21	0.15	54.22
Last 5	12:56:29	3602.83	20.61	5.19	2395.38	5.67	38.21	0.14	53.73
Last 5	13:01:29	3902.83	20.73	5.19	2392.09	4.24	38.21	0.12	53.23
Variance 0			0.04	-0.00	-0.46			-0.02	-0.17
Variance 1			0.01	-0.00	5.68			-0.01	-0.50
Variance 2			0.12	-0.00	-3.28			-0.02	-0.50

Notes

Sampled BRGWC-50 at 1300

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-29 14:03:57

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166624518	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	LaMotte	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.52 in
Depth to Water	39.33 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:46:20	300.03	23.52	6.53	474.48	5.47	39.73	2.48	-41.97
Last 5	13:51:20	600.02	21.81	6.71	482.63	4.16	39.79	1.99	-73.61
Last 5	13:56:20	900.02	21.68	6.75	480.37	3.28	39.79	1.91	-81.73
Last 5	14:01:20	1200.02	21.82	6.77	485.81	2.21	39.79	1.94	-86.89
Last 5									
Variance 0			-1.71	0.18	8.15			-0.49	-31.64
Variance 1			-0.13	0.04	-2.26			-0.08	-8.12
Variance 2			0.14	0.02	5.44			0.03	-5.16

Notes

Sampled BRGWC-52 at 1400

Grab Samples

FIELD DATA FORMS

November 2018

Product Name: Low-Flow System

Date: 2018-11-28 16:06:51

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	55 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-45	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.08 in
Depth to Water	10.88 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:44:07	1200.02	19.26	6.02	504.68	12.30	11.22	0.22	9.18
Last 5	15:49:07	1500.02	19.36	6.01	500.15	7.89	11.22	0.18	11.01
Last 5	15:54:07	1800.01	19.51	6.00	494.38	6.14	11.22	0.16	12.49
Last 5	15:59:07	2100.01	18.87	5.99	497.74	7.79	11.22	0.17	13.64
Last 5	16:04:07	2400.01	18.78	5.99	496.15	3.99	11.22	0.17	14.53
Variance 0			0.15	-0.01	-5.77			-0.02	1.49
Variance 1			-0.63	-0.01	3.35			0.01	1.14
Variance 2			-0.10	-0.00	-1.58			-0.00	0.89

Notes

Sampled BRGWC-45 at 1605

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-28 11:09:15

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	92 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	92 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-47	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5006349 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.84 in
Depth to Water	27.33 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:45:36	4802.99	13.97	5.75	2229.36	18.10	27.90	0.34	109.92
Last 5	10:50:36	5102.98	14.18	5.73	2263.69	17.30	27.90	0.33	109.45
Last 5	10:55:36	5402.98	14.48	5.74	2233.16	15.50	27.90	0.32	109.35
Last 5	11:00:36	5702.98	14.21	5.75	2203.17	87.32	27.90	0.28	109.35
Last 5	11:05:36	6002.97	14.16	5.74	2204.68	2.35	27.90	0.29	109.18
Variance 0			0.30	0.01	-30.53			-0.00	-0.10
Variance 1			-0.27	0.01	-30.00			-0.05	0.00
Variance 2			-0.05	-0.01	1.51			0.01	-0.17

Notes

Dark grey water with black particulates observed during initial purge. BRGWC-47 sampled at 1105

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-28 12:17:47

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	63 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	63 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-50	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4961957 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	36.87 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:00:14	300.04	15.12	6.32	1581.89	43.60	37.02	4.13	97.39
Last 5	12:05:14	600.02	17.26	5.31	2284.03	13.80	37.02	1.01	100.12
Last 5	12:10:14	900.02	17.39	5.28	2287.66	5.66	37.05	1.14	102.65
Last 5	12:15:14	1200.01	17.67	5.28	2292.14	4.82	37.05	1.12	104.82
Last 5									
Variance 0			2.14	-1.01	702.14			-3.12	2.72
Variance 1			0.13	-0.03	3.63			0.13	2.53
Variance 2			0.28	-0.00	4.48			-0.02	2.18

Notes

Sampled BRGWC-50 at 1215

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-28 14:36:35

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.4 in
Depth to Water	39.07 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:14:57	900.02	17.55	6.43	473.43	2.87	39.46	3.89	20.62
Last 5	14:19:57	1200.01	17.22	6.43	482.70	2.75	39.47	4.55	11.16
Last 5	14:24:57	1500.01	16.99	6.45	484.04	2.81	39.48	4.95	4.64
Last 5	14:29:57	1800.01	17.31	6.46	483.73	2.60	39.51	5.15	-1.28
Last 5	14:34:57	2100.01	17.45	6.44	479.50	2.54	39.52	5.04	-5.68
Variance 0			-0.23	0.02	1.34			0.40	-6.52
Variance 1			0.31	0.01	-0.31			0.20	-5.92
Variance 2			0.14	-0.01	-4.23			-0.11	-4.41

Notes

Sampled BRGWC-52 at 1435

Grab Samples

FIELD DATA FORMS

December 2018

Product Name: Low-Flow System

Date: 2018-12-18 10:06:07

Project Information:		Pump Information:	
Operator Name	Karim Minkara	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	61.01 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505591		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	56.01 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	300 mL/min
Well diameter	2 in	Total System Volume	0.7573135 L
Well Total Depth	61.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	52.82 ft	Total Volume Pumped	16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:43:48	1500.02	17.92	6.16	89.17	1.10	52.82	7.41	157.35
Last 5	09:48:48	1800.02	17.74	6.14	89.51	0.96	52.82	7.42	154.12
Last 5	09:53:49	2101.02	17.59	6.12	89.74	0.43	52.82	7.42	152.25
Last 5	09:58:49	2401.02	17.57	6.10	89.65	0.38	52.82	7.42	151.35
Last 5	10:03:49	2701.02	17.68	6.08	89.71	0.35	52.82	7.38	151.65
Variance 0			-0.15	-0.02	0.23			0.00	-1.87
Variance 1			-0.02	-0.01	-0.09			-0.00	-0.90
Variance 2			0.11	-0.02	0.06			-0.04	0.31

Notes

3 well vol, DTW below TOP (>52.82)

DTW > Top of pump (in screen). Pump rate changed from 400 to 300 after 14L purged.

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-18 12:24:38

Project Information:		Pump Information:	
Operator Name	Karim Minkara	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	80.54 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505591		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	75.54 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.8444842 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	87 in
Depth to Water	53.31 ft	Total Volume Pumped	11.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:59:16	5405.23	15.86	6.43	168.77	0.49	59.80	3.19	99.02
Last 5	12:04:17	5706.23	17.44	6.43	169.21	0.43	60.14	2.89	95.98
Last 5	12:09:17	6006.23	17.32	6.46	173.30	0.44	60.27	3.34	105.87
Last 5	12:14:20	6309.23	17.38	6.50	174.74	0.41	60.43	3.68	108.33
Last 5	12:19:20	6609.23	17.27	6.50	172.66	0.35	60.56	3.57	104.03
Variance 0			-0.13	0.03	4.09			0.45	9.89
Variance 1			0.06	0.04	1.44			0.34	2.45
Variance 2			-0.11	-0.00	-2.08			-0.11	-4.30

Notes

Changed gas tank out during purge (4805 and 5105 sec mark). Changed pump rate to 100 after 900 sec

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-18 15:08:05

Project Information:		Pump Information:	
Operator Name	Karim Minkara	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	43.8 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505591		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38.8 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.6804979 L
Well Total Depth	43.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	39.05 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:47:06	2402.02	19.14	5.87	271.37	1.25	39.20	1.70	98.54
Last 5	14:52:07	2703.47	19.01	5.82	263.10	0.70	39.20	2.01	124.47
Last 5	14:57:07	3003.47	19.04	5.79	260.67	0.57	39.20	2.18	139.09
Last 5	15:02:07	3303.47	19.10	5.78	260.67	0.77	39.20	2.27	138.92
Last 5	15:07:07	3603.47	19.06	5.78	260.61	0.49	39.20	2.36	137.43
Variance 0			0.03	-0.03	-2.42			0.17	14.62
Variance 1			0.05	-0.00	-0.00			0.10	-0.17
Variance 2			-0.03	-0.00	-0.07			0.09	-1.49

Notes

3 well volume

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-18 12:56:26

Project Information:		Pump Information:	
Operator Name	Chris Tidwell	Pump Model/Type	QED Well Wizard
Company Name	Golder Associates	Tubing Type	polyethelene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	21 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte	Pump placement from TOC	16 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.5787319 L
Well Total Depth	21 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	8.32 ft	Total Volume Pumped	4.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:29:24	600.02	18.04	5.83	563.92	22.90	8.31	0.57	89.13
Last 5	12:34:24	900.02	18.08	5.85	569.36	8.85	8.30	0.46	89.29
Last 5	12:39:24	1200.02	17.91	5.86	579.02	5.27	8.30	0.66	89.87
Last 5	12:44:24	1500.02	18.03	5.85	569.83	5.03	8.30	0.70	90.03
Last 5	12:49:24	1800.02	17.99	5.84	574.47	3.45	8.30	0.74	91.67
Variance 0			-0.16	0.01	9.66			0.20	0.58
Variance 1			0.12	-0.01	-9.18			0.04	0.16
Variance 2			-0.05	-0.01	4.64			0.05	1.64

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-20 10:10:17

Project Information:		Pump Information:	
Operator Name	Travis Martinez	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.250 in
Site Name	Plant Branch	Tubing Length	37.00 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538245		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	28.41 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.8421511 L
Well Total Depth	33.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.09 in
Depth to Water	5.36 ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:53:57	300.13	16.15	5.69	473.40	0.35	5.49	0.77	150.82
Last 5	09:58:57	600.03	16.39	5.75	471.50	0.49	5.47	0.49	136.91
Last 5	10:03:57	900.02	16.59	5.78	468.71	0.19	5.45	0.41	128.59
Last 5	10:08:57	1200.02	16.40	5.78	470.62	0.27	5.45	0.23	123.23
Last 5									
Variance 0			0.24	0.07	-1.90			-0.28	-13.91
Variance 1			0.21	0.02	-2.80			-0.08	-8.32
Variance 2			-0.19	0.01	1.92			-0.18	-5.36

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-18 15:24:12

Project Information:		Pump Information:	
Operator Name	Chris Tidwell	Pump Model/Type	QED Well Wizard
Company Name	Golder Associates	Tubing Type	polyethelene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	9.48 ft	Total Volume Pumped	4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:00:32	1200.02	19.52	4.36	565.38	0.40	9.62	0.88	153.67
Last 5	15:05:32	1500.02	19.59	4.36	564.10	0.35	9.62	1.16	154.39
Last 5	15:10:32	1800.02	19.55	4.39	558.51	0.27	9.62	0.92	154.03
Last 5	15:15:32	2100.02	19.50	4.39	563.28	0.25	9.61	0.72	154.28
Last 5	15:20:32	2400.10	19.59	4.38	561.65	0.31	9.62	0.76	156.01
Variance 0			-0.04	0.02	-5.59			-0.25	-0.36
Variance 1			-0.04	0.01	4.76			-0.19	0.25
Variance 2			0.09	-0.02	-1.63			0.04	1.73

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-18 16:32:40

Project Information:		Pump Information:	
Operator Name	Karim Minkara	Pump Model/Type	QED
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	22.35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505591		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	17.35 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5847575 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	4.25 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:10:24	900.02	17.21	6.18	870.18	14.10	4.41	0.42	102.92
Last 5	16:15:24	1200.02	17.32	6.19	879.30	11.54	4.41	0.24	106.17
Last 5	16:20:24	1500.02	17.38	6.19	885.73	7.91	4.41	0.17	108.62
Last 5	16:25:25	1800.78	17.27	6.19	886.66	6.83	4.41	0.14	110.21
Last 5	16:30:25	2100.78	17.36	6.18	890.18	4.93	4.41	0.12	111.50
Variance 0			0.07	-0.00	6.43			-0.07	2.45
Variance 1			-0.11	0.00	0.93			-0.03	1.59
Variance 2			0.08	-0.01	3.52			-0.02	1.29

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-19 12:12:12

Project Information:		Pump Information:	
Operator Name	Chris Tidwell	Pump Model/Type	QED Well Wizard
Company Name	Golder Associates	Tubing Type	polyethelene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.6992443 L
Well Total Depth	48 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	37.90 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:49:11	300.48	17.82	5.75	754.53	0.65	38.15	3.56	98.33
Last 5	11:54:11	600.48	16.63	5.74	736.80	1.27	38.00	4.02	102.41
Last 5	11:59:11	900.48	15.00	5.76	750.00	3.14	37.99	4.61	102.69
Last 5	12:04:11	1200.48	14.44	5.78	760.00	3.90	38.00	4.64	100.72
Last 5	12:09:11	1500.48	14.28	5.79	760.88	4.36	38.00	4.78	100.36
Variance 0			-1.63	0.03	13.20			0.59	0.28
Variance 1			-0.56	0.02	10.00			0.03	-1.97
Variance 2			-0.16	0.00	0.88			0.14	-0.35

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-20 10:34:40

Project Information:		Pump Information:	
Operator Name	Karim Minkara	Pump Model/Type	Peristaltic
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	55 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505591		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-45	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	60.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.48 in
Depth to Water	9.85 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:10:09	300.05	16.20	6.74	516.50	4.55	10.12	0.65	-134.99
Last 5	10:15:09	600.02	16.82	6.26	494.56	3.46	10.13	0.35	-124.18
Last 5	10:20:09	900.03	17.01	6.13	479.05	4.37	10.13	0.27	-132.27
Last 5	10:25:09	1200.03	17.05	6.08	475.59	3.34	10.14	0.23	-135.58
Last 5	10:30:09	1500.02	17.23	6.04	468.65	3.06	10.14	0.20	-139.90
Variance 0			0.18	-0.12	-15.50			-0.08	-8.08
Variance 1			0.04	-0.06	-3.46			-0.04	-3.32
Variance 2			0.18	-0.04	-6.94			-0.03	-4.31

Notes

FB-3 taken here

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-19 14:28:57

Project Information:		Pump Information:	
Operator Name	Chris Tidwell	Pump Model/Type	QED Well Wizard
Company Name	Golder Associates	Tubing Type	polyethelene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	97.08 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte	Pump placement from TOC	92.10 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-47	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.9183091 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	26.68 ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:04:29	2403.98	19.10	5.80	2182.27	10.30	27.01	0.47	91.84
Last 5	14:09:29	2703.98	18.61	5.80	2181.85	9.31	26.98	0.56	91.96
Last 5	14:14:29	3003.98	18.25	5.80	2183.14	6.20	26.98	0.61	91.67
Last 5	14:19:29	3303.98	17.99	5.80	2192.71	5.13	26.98	0.67	91.42
Last 5	14:24:32	3606.98	17.81	5.80	2193.97	4.87	26.98	0.76	91.23
Variance 0			-0.36	-0.00	1.30			0.05	-0.29
Variance 1			-0.27	0.00	9.57			0.06	-0.25
Variance 2			-0.18	0.00	1.26			0.10	-0.19

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-19 10:42:30

Project Information:		Pump Information:	
Operator Name	Chris Tidwell	Pump Model/Type	QED Well Wizard
Company Name	Golder Associates	Tubing Type	polyethelene
Project Name	1666254	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	68.76 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte	Pump placement from TOC	63.75 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-50	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.7919049 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.32 in
Depth to Water	37.79 ft	Total Volume Pumped	5.85 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:19:28	1800.14	18.70	5.19	2366.67	4.34	38.16	1.07	120.99
Last 5	10:24:28	2100.11	17.63	5.18	2353.39	1.46	38.11	0.86	121.72
Last 5	10:29:28	2400.11	17.27	5.15	2372.45	1.38	38.12	0.56	121.45
Last 5	10:34:28	2700.11	17.32	5.15	2378.68	0.83	38.12	0.44	121.52
Last 5	10:39:28	3000.11	17.32	5.15	2378.54	1.17	38.12	0.38	121.59
Variance 0			-0.35	-0.02	19.06			-0.31	-0.26
Variance 1			0.05	-0.00	6.23			-0.12	0.07
Variance 2			-0.00	-0.00	-0.15			-0.06	0.07

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-20 11:43:32

Project Information:		Pump Information:	
Operator Name	Karim Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	poly
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505591		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.44 in
Depth to Water	38.91 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:25:07	300.02	15.12	6.57	475.03	2.37	39.22	2.20	-179.98
Last 5	11:30:07	600.02	16.65	6.72	481.59	2.31	39.26	0.76	-190.94
Last 5	11:35:07	900.03	16.89	6.74	482.89	1.72	39.27	0.45	-197.00
Last 5	11:40:07	1200.02	16.82	6.75	481.47	1.35	39.28	0.36	-193.86
Last 5									
Variance 0			1.53	0.15	6.55			-1.44	-10.95
Variance 1			0.24	0.02	1.30			-0.31	-6.07
Variance 2			-0.07	0.01	-1.42			-0.09	3.15

Notes

Grab Samples

FIELD DATA FORMS

January 2019

Product Name: Low-Flow System

Date: 2019-01-16 16:12:01

Project Information:		Pump Information:	
Operator Name	Aaron Bickel	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	62 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	62 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-50	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.4917322 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.08 in
Depth to Water	37.36 ft	Total Volume Pumped	4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:49:48	1202.02	19.32	5.14	2414.58	2.22	37.45	1.95	81.89
Last 5	15:54:51	1505.02	19.58	5.15	2417.30	2.76	37.45	1.67	84.50
Last 5	15:59:53	1807.01	19.36	5.14	2418.05	2.12	37.45	1.36	86.61
Last 5	16:04:53	2107.00	19.07	5.14	2429.22	2.19	37.45	1.25	88.02
Last 5	16:09:58	2411.99	18.92	5.14	2424.18	1.51	37.45	1.18	88.99
Variance 0			-0.22	-0.00	0.75			-0.31	2.11
Variance 1			-0.29	-0.00	11.18			-0.11	1.41
Variance 2			-0.15	-0.00	-5.05			-0.07	0.97

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-17 12:50:37

Project Information:		Pump Information:	
Operator Name	Aaron Bickel	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.17 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	38.45 ft	Total Volume Pumped	6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:23:38	1500.01	18.79	6.44	503.90	0.27	38.75	1.24	4.23
Last 5	12:28:40	1802.00	18.72	6.42	506.02	0.26	38.75	0.96	3.55
Last 5	12:33:43	2105.00	18.61	6.41	506.52	0.38	38.75	0.61	1.38
Last 5	12:38:43	2404.99	18.52	6.41	504.34	0.29	38.75	0.50	-0.14
Last 5	12:43:45	2706.99	18.62	6.41	503.45	0.29	38.75	0.42	-2.52
Variance 0			-0.12	-0.01	0.50			-0.35	-2.17
Variance 1			-0.09	-0.00	-2.17			-0.12	-1.52
Variance 2			0.10	0.00	-0.90			-0.08	-2.37

Notes

Grab Samples

FIELD DATA FORMS

February 2019

Product Name: Low-Flow System

Date: 2019-02-13 14:37:06

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.88 in
Depth to Water	38.14 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:19:05	300.03	18.52	6.49	497.83	1.98	38.56	1.79	-37.79
Last 5	14:24:05	600.02	18.69	6.48	498.67	1.58	38.62	1.09	-45.35
Last 5	14:29:05	900.02	18.60	6.45	506.15	1.31	38.63	0.55	-44.87
Last 5	14:34:05	1200.02	18.87	6.42	504.12	1.24	38.63	0.37	-41.77
Last 5									
Variance 0			0.17	-0.01	0.84			-0.70	-7.56
Variance 1			-0.08	-0.03	7.48			-0.54	0.48
Variance 2			0.26	-0.03	-2.03			-0.18	3.11

Notes

Sampled BRGWC-52 at 1435. FB, EB, FD, and extra Radium

Grab Samples

FIELD DATA FORMS

March 2019

Product Name: Low-Flow System

Date: 2019-03-19 12:38:40

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	55 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model		Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7304883 L
Well Total Depth	61.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	55.00 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:01:52	300.07	13.80	5.84	91.93	1.84	55.01	7.68	70.39
Last 5	12:06:52	600.00	13.70	5.69	93.31	3.19	55.01	6.52	74.17
Last 5	12:11:52	900.00	13.88	5.67	93.87	1.00	55.01	6.66	71.21
Last 5	12:16:52	1199.99	13.91	5.72	94.53	1.22	55.01	6.95	71.88
Last 5	12:21:52	1499.98	13.93	5.71	94.74	1.03	55.01	7.12	72.27
Variance 0			0.18	-0.01	0.56			0.14	-2.96
Variance 1			0.03	0.05	0.66			0.29	0.68
Variance 2			0.02	-0.01	0.21			0.16	0.38

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-19 14:36:06

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	75.54 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model		Pump placement from TOC	75.54 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-12I	Final Pumping Rate	190 mL/min
Well diameter	2 in	Total System Volume	0.822167 L
Well Total Depth	80.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	24 in
Depth to Water	52.91 ft	Total Volume Pumped	8.55 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:12:19	1499.98	14.89	6.31	184.58	0.29	54.91	1.96	66.05
Last 5	14:17:19	1799.97	14.67	6.29	182.69	0.33	54.91	0.95	66.89
Last 5	14:22:19	2099.96	14.57	6.27	181.14	0.35	54.91	0.65	67.70
Last 5	14:27:19	2399.95	14.40	6.29	179.29	0.36	54.91	0.61	66.88
Last 5	14:32:19	2699.94	14.30	6.28	178.82	0.34	54.91	0.62	67.63
Variance 0			-0.10	-0.02	-1.55			-0.30	0.81
Variance 1			-0.17	0.02	-1.85			-0.04	-0.82
Variance 2			-0.10	-0.01	-0.47			0.01	0.75

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-19 15:27:56

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	38.8 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model		Pump placement from TOC	38.80 ft

Well Information:		Pumping Information:	
Well ID	BRGWA-23S	Final Pumping Rate	190 mL/min
Well diameter	2 in	Total System Volume	0.6581808 L
Well Total Depth	43.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	38.8 ft	Total Volume Pumped	4.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:04:37	300.02	21.05	6.10	262.84	6.30	38.80	8.55	72.90
Last 5	15:09:37	600.01	21.56	5.46	261.83	4.90	38.80	6.06	73.51
Last 5	15:14:37	900.00	22.21	5.34	260.57	4.17	38.80	5.96	74.53
Last 5	15:19:37	1199.99	22.74	5.30	258.81	3.67	38.80	5.92	75.48
Last 5	15:24:37	1499.98	22.84	5.28	260.52	4.25	38.80	6.10	75.38
Variance 0			0.65	-0.12	-1.26			-0.10	1.03
Variance 1			0.53	-0.04	-1.76			-0.05	0.94
Variance 2			0.10	-0.02	1.72			0.18	-0.10

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-20 16:51:09

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	BRGWC-25I	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.4 in
Depth to Water	7.00 ft	Total Volume Pumped	8.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:27:39	300.03	16.49	6.01	573.99	1.64	7.11	1.35	89.78
Last 5	16:32:39	600.01	16.41	6.00	572.85	1.63	7.12	1.72	90.24
Last 5	16:37:39	900.00	16.42	6.03	574.11	1.47	7.12	1.12	88.97
Last 5	16:42:39	1199.99	16.55	6.02	574.59	1.59	7.12	0.52	89.00
Last 5	16:47:39	1499.99	16.79	6.03	571.60	1.81	7.12	0.43	88.67
Variance 0			0.01	0.03	1.25			-0.60	-1.27
Variance 1			0.13	-0.01	0.48			-0.59	0.03
Variance 2			0.24	0.00	-2.99			-0.09	-0.34

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-19 16:54:04

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	28.41 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model		Pump placement from TOC	28.41 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-27I	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.6118059 L
Well Total Depth	33.41 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	2.63 ft	Total Volume Pumped	5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:31:31	600.01	15.38	5.62	479.92	0.68	2.66	0.88	79.52
Last 5	16:36:31	900.00	15.26	5.72	482.42	0.46	2.66	0.42	78.45
Last 5	16:41:31	1199.99	15.20	5.73	482.38	0.56	2.67	0.42	78.87
Last 5	16:46:31	1499.98	15.23	5.75	482.91	0.37	2.66	0.43	78.33
Last 5	16:51:31	1799.97	15.20	5.75	482.93	--	--	0.44	78.64
Variance 0			-0.06	0.01	-0.04			-0.01	0.41
Variance 1			0.03	0.02	0.54			0.01	-0.54
Variance 2			-0.03	-0.01	0.01			0.01	0.31

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-20 15:23:45

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	BRGWC-29I	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	9.90 ft	Total Volume Pumped	6.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:55:01	600.01	16.75	3.84	600.20	3.73	8.96	2.49	112.79
Last 5	15:00:01	900.00	16.59	4.14	565.63	6.22	8.98	1.08	110.60
Last 5	15:10:01	1499.99	18.02	4.35	555.79	6.71	8.99	0.86	107.32
Last 5	15:15:01	1799.98	18.72	4.38	554.08	6.56	8.98	0.90	106.68
Last 5	15:20:01	2099.97	18.60	4.40	552.60	4.97	8.98	0.95	106.34
Variance 0			1.43	0.20	-9.84			-0.22	-3.28
Variance 1			0.69	0.04	-1.72			0.04	-0.65
Variance 2			-0.12	0.02	-1.47			0.05	-0.33

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-20 13:03:35

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	17.35 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	17.35 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-30I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5624405 L
Well Total Depth	22.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.5 in
Depth to Water	4.11 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:40:48	900.00	14.83	6.13	1087.78	8.45	4.14	4.45	85.54
Last 5	12:45:48	1199.99	14.39	6.21	1105.27	7.35	4.15	4.55	84.11
Last 5	12:50:48	1499.98	14.12	6.25	1115.81	4.29	4.15	4.06	83.06
Last 5	12:55:48	1799.97	14.02	6.24	1090.66	2.84	4.15	3.98	82.73
Last 5	13:00:48	2099.97	14.05	6.24	1121.78	1.95	4.15	3.93	82.71
Variance 0			-0.28	0.03	10.54			-0.49	-1.05
Variance 1			-0.10	-0.00	-25.15			-0.09	-0.33
Variance 2			0.03	0.00	31.12			-0.05	-0.02

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-20 14:07:53

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	QED well wizard
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-32S	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.6769272 L
Well Total Depth	48 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.1 in
Depth to Water	34.79 ft	Total Volume Pumped	5.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:43:45	900.00	15.65	5.97	768.61	1.89	34.87	8.42	72.66
Last 5	13:48:45	1200.00	16.15	5.89	759.42	1.75	34.87	6.24	72.40
Last 5	13:53:45	1499.99	16.46	5.87	753.17	1.80	34.88	4.04	72.89
Last 5	13:58:45	1800.02	16.68	5.87	750.86	1.49	34.88	4.10	73.94
Last 5	14:03:45	2099.99	16.95	5.88	749.39	1.56	34.88	4.09	74.63
Variance 0			0.31	-0.02	-6.25			-2.20	0.50
Variance 1			0.22	0.01	-2.31			0.06	1.05
Variance 2			0.27	0.00	-1.47			-0.00	0.68

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-19 16:45:08

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	92 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	92 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-47	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.5006349 L
Well Total Depth	97.08 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.44 in
Depth to Water	23.25 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:26:25	300.03	20.97	6.02	2205.69	12.18	23.70	0.95	-114.07
Last 5	16:31:25	600.02	20.70	5.92	2215.32	6.72	23.75	0.56	-83.31
Last 5	16:36:25	900.02	20.52	5.91	2216.64	6.33	23.82	0.48	-79.09
Last 5	16:41:25	1200.02	20.62	5.89	2218.25	4.95	23.87	0.45	-76.91
Last 5									
Variance 0			-0.27	-0.10	9.63			-0.38	30.76
Variance 1			-0.18	-0.01	1.33			-0.09	4.23
Variance 2			0.10	-0.02	1.60			-0.02	2.17

Notes

Sampled BRGWC-47 at 1640

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-20 13:37:25

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	63.7 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	63.7 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-50	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4993201 L
Well Total Depth	68.76 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.44 in
Depth to Water	37.03 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:24:45	300.03	20.11	5.38	2330.44	3.83	37.15	0.41	-77.56
Last 5	13:29:45	600.02	20.30	5.33	2348.32	1.51	37.15	0.28	-88.11
Last 5	13:34:45	900.02	20.24	5.32	2359.55	2.75	37.15	0.25	-91.53
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.19	-0.05	17.88			-0.13	-10.55
Variance 2			-0.06	-0.01	11.22			-0.04	-3.42

Notes

Sampled BRGWC-50 at 1335. EB-2 here

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-20 10:22:35

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166625418	Tubing Diameter	0.170 in
Site Name	Plant Branch	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	70 ft

Well Information:		Pumping Information:	
Well ID	BRGWC-52I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5274396 L
Well Total Depth	76.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.88 in
Depth to Water	38.11 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:10:04	300.11	15.75	6.58	519.69	3.82	38.54	0.67	-130.51
Last 5	10:15:03	600.02	16.65	6.60	509.28	1.94	38.59	0.25	-144.60
Last 5	10:20:03	900.02	16.46	6.59	505.24	1.26	38.60	0.16	-143.07
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.91	0.02	-10.42			-0.42	-14.09
Variance 2			-0.19	-0.00	-4.04			-0.09	1.53

Notes

Sampled BRGWC-52I at 1020. DUP-2 here

Grab Samples

APPENDIX A

Data Validation Summaries

ENVIRONMENTAL® STANDARDS

Setting the Standards for Innovative Environmental Solutions

Stage 2A Data Verification Report
Georgia Power
Branch Fossil Plant
Site Ash Pond
Coal Combustion Residuals Project
Groundwater Samples

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the 207 groundwater samples collected as part of the eight rounds of 2016-2018 baseline monitoring, at the Georgia Power Branch Fossil Plant facility. These samples were collectively analyzed by Pace Analytical Services, Inc. (Pace), of Peachtree Corners, Georgia, or Asheville, North Carolina, for total metals by SW-846 Method 6020B; for total mercury by SW-846 Method 7470A; for total dissolved solids (TDS) by Standard Methods (SM) 2540C; and for anions (specifically, chloride, fluoride, and sulfate) by US EPA Method 300.0. In addition, these samples were collectively analyzed by Pace of Greensburg, Pennsylvania, for total radium-226 by SW-846 Method 9315, for total radium-228 by SW-846 Method 9320, and for combined radium-226+228 by calculation.

This review was performed with guidance from the US EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); the US EPA Region IV Data Validation Standard Operating Procedures (SOPs; US EPA Region IV, September 2011); and the applied analytical methods. These validation guidance documents, with the exception of the analytical methods, specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the SW-846, US EPA, and SM methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the SW-846, US EPA, and SM methods utilized by the laboratory.

1140 Valley Forge Road P.O. Box 810 Valley Forge, PA 19482 Tel: 610.935.5577 Fax: 610.935.5583 Web: www.envstd.com

Summary

The analytical results and associated laboratory quality control (QC) samples were reviewed to determine the integrity of the reported analytical results and to verify that the data met the established data quality objectives.

The following sampling events were evaluated as part of this QA review: Event 1, collected 8/31/2016 through 9/8/2016; Event 2, collected 11/15/2016 through 11/21/2016; Event 3, collected 2/20/2017 through 2/24/2017; Event 4, collected 6/12/2017 through 6/15/2017; Event 5, collected 9/26/2017 through 9/28/2017; Event 6, collected 2/13/2018 through 2/15/2018; Event 7, collected 6/26/2018 through 6/28/2018; Event 8, collected 12/18/2018 through 12/20/2018; a catch-up event, collected 9/23/2016, 3/13/2017, 3/14/2017, 4/17/2017, 5/15/2017, 8/30/2017, 8/31/2017, 8/2/2018, 8/3/2018, 8/10/2018, 8/23/2018, and 9/19/2018; and a Pond B event collected 3/6/2018, 3/15/2018, 5/1/2018, 6/28/2018, and 10/29/2018.

The following samples were evaluated as part of this QA review: BRGWA-5S, BRGWA-5I, BRGWA-2I, BRGWA-2S, BRGWA-6S, BRGWA-12I, BRGWA-12S, BRGWA-23S, BRGWC-30I, BRGWC-24S, BRGWC-38S, BRGWC-35S, BRGWC-33S, BRGWC-17S, BRGWC-36S, BRGWC-32S, BRGWC-34S, BRGWC-27S, BRGWC-29I, BRGWC-25I, BRGWC-27I, BRGWC-37S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52, BRGWC-52I, PZ-41S, PZ-42S, PZ-40S, PZ-51S, PZ-51I, PZ-52I, PZ-45, PZ-47, PZ-10S, PZ-44, PZ-46, PZ-50, PZ-48, and PZ-49.

The following Pace inorganic SDGs were evaluated as part of this QA review: AZI0038, AZI0059, AZI0174, AZI0245, AZI0270, AZK0545, AZK0600, AZK0639, AZK0671, AAB0716, AAB0838, AAB0884, AAB0885, AAC0158, AAF0486, AAF0543, AFF0595, AAF0631, AAI0919, AAI0865, AAI0935, 261843, 261915, 261937, 266538, 266541, 266578, 266580, 266662, 267839, 268107, 268568, 269475, AAC0576, AAC0497, AAD0601, AAE0503, AAH0935, AAH0984, AZI0812, 2612884, 2612887, 2613019, 2613021, 262514, 262928, 264546, 266665, and 2610944.

The following Pace radiological SDGs were evaluated as part of this QA review: 30194944, 30195120, 30195377, 30195547, 30195633, 30202876, 30203114, 30203217, 30203642, 30211539, 30211808, 30211896, 30211897, 30212563, 30221513, 30221632, 30221830, 30222149, 30231661, 30231328, 30231663, 261843, 261915, 261937, 266540, 266542, 266579, 266582, 266664, 268108, 269476, 30213645, 30216664, 30219103, 30213361, 30228914, 30228913, 2612888, 2613020, 2613022, 262514, 262928, 264548, 266666, 2612886, 2610945, and 268569.

All data are considered usable as reported, or usable after integration of data validation qualifications.

Inorganic and Radiological Data Review

Data validation was performed for these samples based on the sample results, summary QC data, and raw data provided by the laboratory. The findings offered in this report for the inorganic analyses are based upon a review of the following QC measures:

- Sample condition upon laboratory receipt
- Chain-of-Custody (COC) Records
- Blank analysis results
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision
- Laboratory duplicate precision
- Sample holding times
- Case Narratives
- Chemical yield
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision
- Field duplicate precision

The above QC measures were evaluated against the analytical method requirements and QC acceptance criteria. The data were validated based on guidance from the US EPA Region IV Data Validation SOPs, the referenced procedures, and were qualified as appropriate as described in the sections below.

Comments and Exceptions

1. In the metals fraction, the laboratory did not report a set number of significant figures for results < 0.1 mg/L. All results that were < 0.1 mg/L were reported to four decimal places. As a result, reported sample results ranged from one to three significant figures. In addition, the anions results < 1 mg/L were reported to two decimal places, which led to sample results with one to two significant figures.

2. The data validator applied qualification to combined radium-226+228 based upon the QC samples associated with the analyses of the individual isotopes, radium-226 and radium-228. The electronic data deliverable (EDD) and the database only include the laboratory results for the combined radium-226+228; therefore, qualification of the individual isotopes is not addressed in this QA review.

3. SW-846 Method 9315 includes all alpha-emitting isotopes of radium. In order to analyze for only radium-226, a 21-day ingrowth period must be used. The radium-226 reported by the laboratory did not undergo a 21-day ingrowth; therefore, the results reported as radium-226 potentially contain additional alpha-emitting radium isotopes and could be high biased.

4. Combined radium-226+228 was reported as the summation of the calculated activities for radium-226 and radium-228. As consistent with routine radiological reporting conventions, negative activities were reported for the radium-226 and radium-228 analyses; however, all negative activities were entered as zero in the calculation of combined radium-226+228 activity.

5. The combined radium-226+228 sample-specific minimum detectable concentration (MDC) was reported as the summation of the MDCs for radium-226 and radium-228.

Consequently, there may be instances where a detection was observed in one of the individual isotopes but the combined radium-226+228 result was reported as "not-detected" due to the laboratory's reporting convention for combined radium-226+228.

6. The combined radium-226+228 result uncertainty was reported as the summation of the calculated uncertainties for radium-226 and radium-228. If routine statistical uncertainty reporting conventions were followed, the result uncertainty would have been reported as the root sum square (RSS; the square root of the sum of the squared individual uncertainties).

7. The laboratory did not flag results < the MDC as "not-detected" in the data package provided. The data validator qualified these samples as "U" on the data tables.

8. In SDG 30195120, the collection times on the COC and sample container for sample BRGWA-12I did not match, the laboratory logged the sample in using the time on the COC. Qualification of data due to this issue was not warranted.

9. In SDG 30195633, the laboratory indicated on the Sample Condition Upon Receipt that one of the sample bottles for sample BRGWC-25I had the sample ID recorded as "2nd Rad Bottle," the collection times on the COC and sample container for sample BRGWC-25I matched. Qualification of data due to this issue was not warranted.

10. In SDGs 30194944, 30195120, 30195377, 30195547, 30195633, 2612886, 2612888, 2613020, 2613022, 268108, 269476, 262514, 262928, 264548, 266666, 2610945, and 268569 containing radiological data, the laboratory did not provide the subcontracted COC record or Sample Condition Upon Receipt checklist from Pace Atlanta to Pace Pittsburgh. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.

11. In SDGs 262514, 262928, and 264546, the laboratory did not provide the subcontracted COC record or Sample Condition Upon Receipt checklist from Pace Atlanta to Pace Asheville. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.

12. In the majority of the data packages, the laboratory did not provide a Case Narrative associated with the metals and wet chemistry or radium analyses. As this item was not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.

13. In the radium fraction of SDG 30194944, the laboratory performed matrix QC (laboratory duplicate) analyses on an associated field blank. Matrix QC analyses are performed to evaluate the impact of matrix interferences on target analyte results in investigative samples, which would not be present in a field blank sample. The data reviewer did not evaluate the results from the matrix QC analyses performed on the associated field blank.

14. In the TDS fraction of SDG AZK0639, the laboratory performed matrix QC (laboratory duplicate) analyses on an associated field blank. Matrix QC analyses are performed to

evaluate the impact of matrix interferences on target analyte results in investigative samples, which would not be present in a field blank sample. The data reviewer did not evaluate the results from the matrix QC analyses performed on the associated field blank.

15. In the TDS fraction of SDGs AAB0838, AAF0595, and AAF0631, the laboratory performed matrix QC (laboratory duplicate) analyses on an associated equipment blank. Matrix QC analyses are performed to evaluate the impact of matrix interferences on target analyte results in investigative samples, which would not be present in a field blank sample. The data reviewer did not evaluate the results from the matrix QC analyses performed on the associated equipment blank.

16. In SDGs 262514, 262928, and 268569, the data package provided did not include the Quality Control Sample Performance Assessment for all samples. Laboratory analytical accuracy and precision could not be evaluated for radium-226 and radium-228 in the project samples.

17. In SDGs 30213645, 30216664, 30219103, 30228914, 30228913, and 30213361, the laboratory did not provide the Sample Login Receipt Checklist from Pace Atlanta. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.

18. In SDGs 30213361 and 30213645, Pace Atlanta did not relinquish the samples to Pace Pittsburgh on the subcontracted COC record. As this item was not needed to complete the data validation, the laboratory has not been requested to provide this information. Qualification of data due to this issue was not warranted.

19. In SDG 30231661, the collection time for sample BRGWC-27I, and in SDG 30231663, the collection time for sample BRGWC-17S, on the Pace Atlanta COC record did not match the subcontracted COC record to Pace Pittsburgh. The laboratory logged the sample using the time from the original COC record. The sample collection time on the COC record and laboratory data report match. Qualification of data due to this issue was not warranted.

20. The following field duplicate pairs (see table) were submitted and analyzed for inorganic and radiological parameters with this data set. Acceptable precision and sample representativeness (the relative percent difference [RPD] between results was ≤ 20% when both results were ≥ 5× the reporting limit [RL], the difference between results was ≤ the RL when at least one result was < 5× the RL, or replicate error ratio [RER] < 3) were demonstrated by the reported results in the field duplicate pair evaluation with the exception of the parameters indicated in the Overall Assessment of Data Section below.

Laboratory SDG(s)	Sample	Field Duplicate
AZI0174 30195377	BRGWC-30I	Dup-1
AZI0245 30195547	BRGWC-35S	Dup-2
AZK0639 30203217	BRGWC-25I	Dup-1
AZK0639 30203217	BRGWC-27I	Dup-2
AAB0838 30211808	BRGWC-17S	Dup-2
AAB0885 30211897	PZ-42S	Dup-3
AAF0543 30221632	BRGWC-24S	Dup-1
AAF0595 30221830	BRGWC-29I	Dup-2
AAF0631 30222149	BRGWC-17S	Dup-3
AAI0865 30231328	BRGWA-12S	Dup-1
AAI0919 30231661	BRGWC-24S	Dup-2
AAI0935 30231663	BRGWC-17S	Dup-3
261915	BRGWC-27I	Dup-1
261937	BRGWC-17S	Dup-2
266541 266542	BRGWC-25I	Dup-1
266578 266579	BRGWC-33S	Dup-2
266662 266664	BRGWC-37S	Dup-3
2612887 2612888	BRGWC-34S	Dup-1
2613021 2613022	BRGWC-35S	Dup-2
2613019 2613020	BRGWC-27I	Dup-3
AAC0576	PZ-41S	FD-1

Laboratory SDG(s)	Sample	Field Duplicate
30213645		
AAD0601 30216664	BRGWC-37S	Dup-1
AAE0503 30219103	BRGWC-37S	Dup-1
AAH0935 30228914	PZ-41S	Dup-1
262514	PZ-44	FD-1
262928	PZ-50	FD-1
264546 264548	PZ-48	FD-1
267839	PZ-51I	FD-1
268568 268569	PZ-52I	FD-1
269475 269476	BRGWC-52I	FD-1
2610944 2610945	BRGWC-52	FD-1

Overall Assessment of Data

Based on a review of the data, qualification of data was warranted as noted below.

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AZI0038	1	BRGWA-2I	antimony and boron	U*	BF – Field blank contamination
AZI0059	1	BRGWA-12I	antimony and boron	U*	BF – Field blank contamination
AZI0174	1	BRGWA-23S	boron	U*	BF – Field blank contamination
AZI0245	1	BRGWC-24S	boron	U*	BF – Field blank contamination BL – Method blank contamination
AZI0245	1	BRGWC-17S	boron	U*	BF – Field blank contamination
30195120	1	BRGWA-12I	combined radium-226+228	U*	BE – Equipment blank contamination
AZK0545	2	BRGWA-6S and BRGWA-5S	boron and chromium	U*	BL – Laboratory blank contamination
AZK0545	2	BRGWA-5S and BRGWA-6S	boron	U*	BE – Equipment blank contamination
AZK0600	2	BRGWA-12I, BRGWA-12S, BRGWA-2I, BRGWA-2S, and BRGWA-5I	boron	U*	BE – Equipment blank contamination
AZK0639	2	BRGWC-17S	boron	U*	BE – Equipment blank contamination
AZK0639	2	BRGWA-23S, BRGWC-36S, and BRGWC-34S	fluoride	U*	BL – Laboratory blank contamination
AZK0639	2	BRGWC-36S	antimony	U*	BL – Laboratory blank contamination
AAB0716	3	BRGWA-6S and BRGWA-5S	sulfate	U*	BL – Laboratory blank contamination
AAF0486	4	BRGWA-2I	mercury	U*	BL – Laboratory blank contamination
AAF0486	4	BRGWA-2I, BRGWA-5S, and BRGWA-6S	lead	U*	BF – Field blank contamination BE – Equipment blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAF0595	4	BRGWC-29I and BRGWC-33S	lead	U*	BF – Field blank contamination BE – Equipment blank contamination
AAF0631	4	BRGWC-38S	lead	U*	BF – Field blank contamination BE – Equipment blank contamination
AAF0486	4	BRGWA-2I	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
AAF0543	4	BRGWC-24S and BRGWC-27I	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Laboratory blank contamination
AAF0595	4	BRGWA-12I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-33S, BRGWC-34S, PZ-40S and PZ-41S	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Laboratory blank contamination
AAF0631	4	BRGWC-17S, BRGWC-35S, BRGWC-36S, BRGWC-37S, and BRGWC-38S	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Laboratory blank contamination
AAF0543	4	BRGWA-2S, BRGWA-12S, and BRGWC-24S	antimony	U*	BL – Laboratory blank contamination
AAF0486	4	BRGWA-5S and BRGWA-6S	sulfate	U*	BF – Field blank contamination BE – Equipment blank contamination
AAF0543	4	BRGWA-12S and BRGWA-2S	sulfate	U*	BF – Field blank contamination BE – Equipment blank contamination
AAF0631	4	BRGWC-37S	sulfate	U*	BE – Equipment blank contamination BF – Field blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAF0543	4	BRGWA-12S, BRGWA-2S, and BRGWC-24S	antimony	U*	BF – Field blank contamination BE – Equipment blank contamination
AAF0595	4	BRGWA-12I, BRGWC-29I, and PZ-40S	antimony	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Laboratory blank contamination
AAF0631	4	BRGWC-17S, BRGWC-36S, BRGWC-37S, and BRGWC-38S	antimony	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Laboratory blank contamination
30222149	4	BRGWC-35S	combined radium-226+228	U*	BF – Field blank contamination BE – Equipment blank contamination
AAI0919	5	BRGWC-24S, BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-33S, BRGWC-34S, PZ-40S, and PZ-41S	mercury	U*	BE – Equipment blank contamination BF- Field blank Contamination BL – Laboratory blank contamination
AAI0919	5	BRGWC-33S and BRGWC-34S	cadmium	U*	BE – Equipment blank contamination
AAI0865	5	BRGWA-2I, BRGWA-5S, BRGWA-5I, BRGWA-6S, BRGWA-12S, BRGWA-12I, BRGWA-23S, and PZ-42S	arsenic	U*	BE – Equipment blank contamination BF – Field blank Contamination
AAI0935	5	BRGWC-37S	sulfate	U*	BF – Field blank contamination
266538	7	BRGWA-2I, BRGWA-5I, BRGWA-5S, and BRGWA-6S	boron	U*	BF – Field blank contamination
266538	7	BRGWA-2I	arsenic	U*	BE – Equipment blank contamination BF – Field blank contamination
266538	7	BRGWA-2S	barium and chloride	U*	BE – Equipment blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
266662	7	BRGWC-37S	chloride	U*	BE – Equipment blank contamination
266541	7	BRGWA-23S and BRGWC-25I	arsenic	U*	BE – Equipment blank contamination BF – Field blank contamination
266541	7	BRGWA-12I	boron	U*	BF – Field blank contamination
266542	7	BRGWA-12S	combined radium-226+228	U*	BE – Equipment blank contamination BF – Field blank contamination BL – Method blank contamination
266578	7	BRGWC-17S	boron	U*	BF – Field blank contamination
266580	7	BRGWC-47	arsenic	U*	BE – Equipment blank contamination BF – Field blank contamination
266582	7	BRGWC-32S	combined radium-226+228	U*	BE – Equipment blank contamination BF – Field blank contamination BL – Laboratory blank Contamination
266662	7	BRGWC-36S, BRGWC-37S, and BRGWC-38S	arsenic	U*	BE – Equipment blank contamination BF – Field blank contamination
266662	7	BRGWC-37S	boron	U*	BF – Field blank contamination
266662	7	BRGWC-38S	mercury	U*	BL – Laboratory blank Contamination
266664	7	BRGWC-38S	combined radium-226+228	U*	BE – Equipment blank contamination BF – Field blank contamination BL – Laboratory blank Contamination
2613019	8	BRGWC-47 and BRGWC-27I	beryllium	U*	BL – Method blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
2613019	8	BRGWC-32S and BRGWC-45	cadmium	U*	BL – Method blank contamination
2613021	8	BRGWC-35S and BRGWC-36S	beryllium	U*	BL – Method blank contamination
2613021	8	BRGWC-36S and BRGWC-38S	cadmium	U*	BL – Method blank contamination
2613021	8	BRGWC-38S	thallium	U*	BL – Method blank contamination
2613020	8	BRGWC-50	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination
2613022	8	BRGWC-38S	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination
2612886	8	BRGWA-12S	combined radium-226+228	U*	BL – Method blank contamination BE – Equipment blank contamination
2612888	8	BRGWC-33S	combined radium-226+228	U*	BL – Method blank contamination BE – Equipment blank contamination
2612887	8	BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, and BRGWC-33S	arsenic	U*	BF – Field blank contamination BE – Equipment blank contamination
2612884	8	BRGWC-25I	arsenic	U*	BF – Field blank contamination BE – Equipment blank contamination
2613020	8	BRGWC-47	combined radium-226+228	U*	BF – Field blank contamination
2612888	8	BRGWC-34S	combined radium-226+228	U*	BE – Equipment blank contamination
267839	catch up	PZ-51S	boron	U*	BL – Method blank contamination
268568	catch up	PZ-47	selenium	U*	BL – Method blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAH0935	catch up	all samples	fluoride	U*	BL – Method blank contamination
AAH0984	catch up	PZ-42S	fluoride	U*	BL – Method blank contamination
269476	catch up	BRGWC-52I	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination
30228913	catch up	PZ-42S	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination
30228914	catch up	all samples	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination
AAD0601	catch up	BRGWC-37S	chromium	U*	BF – Field blank contamination
AAH0984	catch up	PZ-42S	arsenic	U*	BF – Field blank contamination BE – Equipment blank contamination
AAH0935	catch up	all samples	arsenic	U*	BF – Field blank contamination BE – Equipment blank contamination
266666	Pond B	BRGWC-30I	combined radium-226+228	U*	BL – Method blank contamination
262514	Pond B	all samples	arsenic	U*	BF – Field blank contamination BE – Equipment blank contamination
30203642	2	BRGWC-29I	combined radium-226+228	J	BL – Laboratory blank contamination
30211896	3	BRGWC-38S	combined radium-226+228	J	BL – Laboratory blank contamination
30221830	4	BRGWC-29I	combined radium-226+228	J	BE – Equipment blank contamination
261915	6	BRGWA-12I, BRGWC-25I, BRGWC-29I, and BRGWC-32S	combined radium-226+228	J	BF – Field blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
261937	6	BRGWC-38S	combined radium-226+228	J	BE – Equipment blank contamination
266580	7	BRGWC-47	TDS	J	BE – Equipment blank contamination BF – Field blank contamination
266662	7	BRGWC-37S	TDS	J	BE – Equipment blank contamination BF – Field blank contamination
266540	7	BRGWA-2S	combined radium-226+228	J	BE – Equipment blank contamination BF – Field blank contamination BL – Method blank contamination
266542	7	BRGWA-12I	combined radium-226+228	J	BE – Equipment blank contamination BF – Field blank contamination BL – Method blank contamination
266582	7	BRGWC-29I	combined radium-226+228	J	BF – Field blank contamination
266538	7	BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, and BRGWA-6S	TDS	J	BF – Field blank contamination
266541	7	BRGWA-12S, BRGWA-12I, BRGWA-23S, and BRGWC-25I	TDS	J	BF – Field blank contamination
266578	7	BRGWC-34S, BRGWC-33S, BRGWC-35S, and BRGWC-17S	TDS	J	BF – Field blank contamination
266580	7	BRGWC-27I and BRGWC-29I	TDS	J	BF – Field blank contamination
266662	7	BRGWC-36S and BRGWC-38S	TDS	J	BF – Field blank contamination
268569	catch up	PZ-52I	combined radium-226+228	J	BL – Method blank contamination
262514	Pond B	PZ-47	combined radium-226+228	J	BL – Method blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
264548	Pond B	PZ-49	combined radium-226+228	J	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
30221830	4	BRGWA-12I, PZ-40S, BRGWC-29I, PZ-41S, BRGWC-32S, BRGWC-33S, BRGWC-30I, and BRGWC-34S	combined radium-226+228	J/UJ	L- – Low LCS recovery
30222149	4	BRGWC-17S, BRGWC-37S, BRGWC-36S, BRGWC-35S, and BRGWC-38S	combined radium-226+228	J/UJ	L- – Low LCS recovery
30231661	5	BRGWC-24S, BRGWC-25I, BRGWC-27I, BRGWC-30I, BRGWC-32S, PZ-40S, and PZ-41S	combined radium-226+228	UJ	L- – Low LCS recovery
30231661	5	BRGWC-29I, BRGWC-33S, and BRGWC-34S	combined radium-226+228	J	L- – Low LCS recovery
30231328	5	BRGWA-2S, BRGWA-2I, BRGWA-5S, BRGWA-5I, BRGWA-6S, BRGWA-12S, BRGWA-12I, BRGWA-23S, and PZ-42S	combined radium-226+228	UJ	L- – Low LCS recovery
30231663	5	all samples	combined radium-226+228	J/UJ	L- – Low LCS recovery
266540	7	all samples	combined radium-226+228	J/UJ	L- – Low LCS recovery
266542	7	all samples	combined radium-226+228	J/UJ (unless previously flagged “U*”)	L- – Low LCS recovery
266579	7	all samples	combined radium-226+228	UJ	L- – Low LCS recovery
266582	7	all samples	combined radium-226+228	J/UJ (unless previously flagged “U*”)	L- – Low LCS recovery
266664	7	all samples	combined radium-226+228	J/UJ (unless previously flagged “U*”)	L- – Low LCS recovery

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
2613019	8	all samples	chloride	J	L- – Low LCS recovery
2613022	8	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCS recovery
2613020	8	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCS recovery
2612886	8	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCSD recovery
2612888	8	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCS/LCSD recoveries
30213645	catch up	all samples	combined radium-226+228	UJ	L- – Low LCS recovery
30213361	catch up	BRGWC-24S	combined radium-226+228	UJ	L- – Low LCS recovery
269476	catch up	all samples	combined radium-226+228	J/UJ (unless previously flagged U*)	L- – Low LCSD recovery
268108	catch up	PZ-52I	combined radium-226+228	J	L- – Low LCS/LCSD recoveries
266666	Pond B	all samples	combined radium-226+228	J/UJ (unless previously flagged U*)	L- – Low LCSD recovery
2610945	Pond B	all samples	combined radium-226+228	UJ	L- – Low LCS/LCSD recoveries
261915	6	BRGWC-25I	combined radium-226+228	J	L+ – High LCSD recovery
261937	6	BRGWC-38S	combined radium-226+228	J	L+ – High LCSD recovery
30228914	catch up	all samples	combined radium-226+228	J (unless previously flagged "U*")	L – Low/high LCS recoveries

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
30228913	catch up	PZ-42S	combined radium-226+228	J	L – Low/high LCS recoveries
30211539	3	BRGWA-5S	combined radium-226+228	J	LP – LCS/LCSD imprecision
30211808	3	BRGWC-29I	combined radium-226+228	J	LP – LCS/LCSD imprecision
264548	Pond B	PZ-47, PZ-48, PZ-49, and PZ-50	combined radium-226+228	J	LP – LCS/LCSD imprecision
266662	7	BRGWC-36S, BRGWC-37S, and BRGWC-38S	chloride	J (unless previously flagged "U*")	M- – Low MS recoveries
AZI0245	1	BRGWC-24S, BRGWC-38S, BRGWC-35S, BRGWC-33S, BRGWC-17S, and BRGWC-36S	chloride	J	M- – Low MS recovery
AZI0245	1	BRGWC-24S, BRGWC-38S, BRGWC-35S, BRGWC-33S, BRGWC-17S, and BRGWC-36S	fluoride	J (unless previously flagged "U*")	M+ – High MS recovery
AZK0671	2	BRGWC-38S, BRGWC-32S, BRGWC-29I, and BRGWC-30I	fluoride	J	M+ – High MS recovery
AFF0631	4	BRGWC-17S, BRGWC-35S, BRGWC-36S, BRGWC-37S, and BRGWC-38S	fluoride	J	M+ – High MS recovery
AAI0919	5	BRGWC-24S, BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-33S, BRGWC-34S, PZ-40S, and PZ-41S	chloride	J	M+ – High MS recovery
AAI0919	5	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-33S, BRGWC-34S, PZ-40S, and PZ-41S	fluoride	J	M+ – High MS recovery
266578	7	BRGWC-34S, BRGWC-33S, BRGWC-35S, and BRGWC-17S	boron	J	M+ – High MS recoveries
266662	7	BRGWC-36S and BRGWC-38S	fluoride	J	M+ – High MS recoveries
2610944	Pond B	all samples	barium	J	M+ – High MS/MSD recoveries

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AZK0639	2	BRGWC-25I	sulfate	J	FD – Field duplicate imprecision
261915	6	BRGWC-27I	TDS	J	FD – Field duplicate impression
266578	7	BRGWC-33S	TDS	J	FD – Field duplicate imprecision
262928	Pond B	PZ-50	fluoride	J	FD – Field duplicate imprecision
264546	Pond B	PZ-48	chloride	J	FD – Field duplicate imprecision

- All inorganic positive results reported between the method detection limit (MDL) and RL have been flagged "J."
- All radiological results reported below the MDC have been flagged "U."

Report prepared by: Jessica Mayberry, Quality Assurance Chemist
Mark Haslett, Quality Analyst
Jessica T. Coello, Quality Assurance Chemist
Report reviewed by: Erin E. Rodgers, Associated Principal
Report reviewed by: Alyssa M. Reed, Senior Quality Assurance Chemist/Project Manager
Report approved by: David I. Thal, CEAC, CQA, Principal Chemist
Date: 2/28/2019

INORGANIC AND RADIOLOGICAL DATA QUALIFIERS

U - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit.

U* - This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.

UJ - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.

J - The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R - The data are unusable. The sample results are rejected due to serious analytical deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

UR - The analyte was analyzed for, but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

Reason Codes and Explanations

Reason Code	Explanation
BE	Equipment blank contamination. The result should be considered “not-detected.”
BF	Field blank contamination. The result should be considered “not-detected.”
BL	Laboratory blank contamination. The result should be considered “not-detected.”
BN	Negative laboratory blank contamination.
C	Initial and/or continuing calibration issue, indeterminate bias.
C+	Initial and/or continuing calibration issue. The result may be biased high.
C-	Initial and/or continuing calibration issue. The result may be biased low.
FD	Field duplicate imprecision.
FG	Total versus dissolved imprecision.
H	Holding time exceeded.
I	Internal standard recovery outside of acceptance limits.
L	LCS and LCSD recoveries outside of acceptance limits, indeterminate bias.
L+	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased high.
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits, indeterminate bias.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.
MP	MS/MSD imprecision.
P	Post-digestion spike recoveries outside of acceptance limits, indeterminate bias.
P+	Post-digestion spike recovery outside of acceptance limits. The result may be biased high.
P-	Post-digestion spike recovery outside of acceptance limits. The result may be biased low.
Q	Chemical preservation issue.
R	RL standards outside of acceptance limits, indeterminate bias.
R+	RL standard(s) outside of acceptance limits. The result may be biased high.
R-	RL standard(s) outside of acceptance limits. The result may be biased low.
T	Temperature preservation issue.
SD	Serial dilution imprecision.
Y	Chemical yields outside of acceptance limits, indeterminate bias.
Y+	Chemical yield(s) outside of acceptance limits. The result may be biased high.
Y-	Chemical yield(s) outside of acceptance limits. The result may be biased low.
ZZ	Other

Quality Control Review of Analytical Data submitted by Pace Analytical Services, LLC

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 Ponds between July 31, 2018 and February 13, 2019. 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 assessment monitoring constituents listed in 40 CFR, Part 257, Appendix IV. Test methods included Inductively Coupled Plasma- Mass Spectrometry (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Determination of Inorganic Anions (USEPA Method 300.0), Solids in Water (Standard Methods 2540C), Radium-226 (USEPA Method 9315) and Radium-228 (USEPA Method 9320).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0) and the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017). In addition, Southern Company Services, Inc. provided data validation guidance. 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 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 with the exception of FD in SDG 2614928 as described in the qualifications sections below.

Accuracy: Laboratory goals for accuracy were met, with the exception of with the exception of barium in SDG 267818 and radium-228 in SDG 267819 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.

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.
J+	The analyte was positively identified above the method detection limit; however, the concentration reported is an estimated value that may be biased high.
U	The analyte was not detected above the method detection limit.
UJ	The analyte was not detected above the method detection limit; the associated method detection limit is approximate and may be inaccurate.

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 of the samples collected at the site, the qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- Certain barium results in SDGs 267818 were qualified as estimated biased high (J+) as the associated matrix spike and/or matrix spike duplicate (MS/MSD) recoveries were above the QC criteria.
- Certain radium-228 results in SDGs 267819 were qualified as estimated biased high (J+) as the associated laboratory control sample and/or laboratory control sample duplicate (LCS/LCSD) recoveries were above the QC criteria.
- Fluoride and chromium results in sample BRGWC-52 from SDG 2614928, were qualified as estimated (J) as the parent sample and field duplicate exceeded field goal precision criteria. Non-detected fluoride and chromium results in sample FD from SDG 2614928, were qualified as estimated (UJ) as the parent sample and field duplicate exceeded field goal precision criteria.
- The non-detect boron result in SDG 2612012 was qualified as non-detect (U) when 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 RL, the method detection limit was raised to the sample result as part of the qualification process.
- Certain radium-226 and total radium results in SDG 2612013 were qualified as non-detect (U) when radium-226 was detected at a similar concentration in an associated blank sample. As shown in Table 2, the minimum detectable concentration (MDC) was raised to the sample result as part of the qualification process.
- Certain total radium results in SDG 2612013 were qualified as estimated bias high (J+) when radium-226 was detected at a similar concentration in an associated blank sample.

Golder reviewed the data from samples collected at the Plant Branch CCR Ash Ponds between July 31, 2018 and February 13, 2019 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

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
SCS Plant Branch

						Analyses			
SDGs	*Field Identification*	*Collection Date*	*Lab Identification*	*Matrix*	*QC Samples*	*TAL Metals + Hg (6020B, 7470A)*	*Anions (300.0)*	*TDS (2540C)*	Radium 226, Radium 228 (9315, 9320)
2612013, 2612012	BRGWC-45	11/28/2018	2612012001/2612013001	GW	-	X	X	X	X
2612013, 2612012	BRGWC-47	11/28/2018	2612012002/2612013002	GW	-	X	X	X	X
2612013, 2612012	BRGWC-50	11/28/2018	2612012003/2612013003	GW	-	X	X	X	X
2612013, 2612012	BRGWC-52	11/28/2018	2612012004/2612013004	GW	-	X	X	X	X
2612013, 2612012	FB-1	11/28/2018	2612012005/2612013005	WQ	FB	X	X	X	X
2612013, 2612012	EB-1	11/28/2018	2612012006/2612013006	WQ	RB	X	X	X	X
2612013, 2612012	FD-1	11/28/2018	2612012007/2612013007	GW	FD-1 (BRGWC-52)	X	X	X	X
2614928, 2614929	BRGWC-52	2/13/2019	2614928001/2614929001	GW	-	X	X	X	X
2614928, 2614929	EB	2/13/2019	2614928002/2614929002	WQ	EB	X	X	X	X
2614928, 2614929	FB	2/13/2019	2614928003/2614929003	WQ	FB	X	X	X	X
2614928, 2614929	FD	2/13/2019	2614928004/2614929004	GW	FD (BRGWC-52)	X	X	X	X
267818, 267819	PZ-45	7/31/2018	267818001/267819001	GW	-	X	X	X	X
267818, 267819	PZ-47	8/1/2018	267818002/267819002	GW	-	X	X	X	X
267818, 267819	PZ-50	8/1/2018	267818003/267819003	GW	-	X	X	X	X
267818, 267819	FB-1	8/1/2018	267818004/267819004	WQ	FB	X	X	X	X

Abbreviations:
EB- Equipment blank
FB - Field blank
FD - Field duplicate
GW - Groundwater
QC - Quality control
TAL - Target analyte list
TDS - Total dissolved solids
WQ - Water quality control

TABLE 2
Qualifier Summary Table
SCS Plant Branch

SDG	*Sample Name*	*Constituent*	*New RL*	*New MDL or MDC*	*Qualifier*	*Reason*
2612012	BRGWC-45	Boron	-	0.026	U	Blank detection
2612013	BRGWC-45	Radium-226	-	0.429	U	Blank detection
2612013	BRGWC-47	Radium-226	-	0.682	U	Blank detection
2612013	BRGWC-50	Radium-226	-	0.675	U	Blank detection
2612013	BRGWC-52	Radium-226	-	0.592	U	Blank detection
2612013	FD-1	Radium-226	-	0.752	U	Blank detection
2612013	BRGWC-47	Total Radium	-	1.67	U	Blank detection
2612013	BRGWC-50	Total Radium	-	1.76	U	Blank detection
2612013	FD-1	Total Radium	-	-	J+	Blank detection
2614928	BRGWC-52	Fluoride	-	-	J	Sample exceeds RPD field goals for precision
2614928	FD	Fluoride	-	-	UJ	Sample exceeds RPD field goals for precision
2614928	BRGWC-52	Chromium	-	-	J	Sample exceeds RPD field goals for precision
2614928	FD	Chromium	-	-	UJ	Sample exceeds RPD field goals for precision
267818	PZ-45	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
267818	PZ-47	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
267818	PZ-50	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
267819	PZ-50	Radium-228	-	-	J+	LCS and/or LCSD recovery above QC criteria

Abbreviations:
MDC: Minimum detectable concentration
MS/MSD: Matrix spike / matrix spike duplicate
QC : Quality control
RL : Reporting limit
SDG : Sample delivery group
TDS : Total dissolved solids
RPD: Relative percentage difference

Qualifiers:
J: Estimated result
J+ : Estimated result, biased high
U : Non-detect result
UJ : Estimated result

Quality Control Review of Analytical Data submitted by Pace Analytical Services, LLC

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 Ponds between March 19, 2019 and March 20, 2019. 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. Test methods included Inductively Coupled Plasma- Mass Spectrometry (USEPA Method 6020B), Determination of Inorganic Anions (USEPA Method 300.0), and Solids in Water (Standard Methods 2540C).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0) and the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017). In addition, Southern Company Services, Inc. provided data validation guidance. The review included an assessment of the results for completeness, precision (laboratory duplicates, matrix spike/matrix spike duplicates), accuracy (laboratory control samples, matrix spike/matrix spike duplicates), and blank contamination (including 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 with the exception of total dissolved solids (TDS) in SDG 2616369 as described in the qualifications sections below.

Field Precision: Field goals for precision were met.

Accuracy: Laboratory goals for accuracy were met.

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.

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 of the samples collected at the site, the qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- Certain TDS results in SDG 2616369 were qualified as estimated (J) as the parent sample and lab duplicate exceeded lab goal precision criteria.
- Certain sulfate and TDS results in SDG 2616407 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 RL, the method detection limit was raised to the sample result as part of the qualification process. When the original sample result was above the RL, both the MDL and the RL were raised to the sample result as part of the qualification process.

Golder reviewed the data from samples collected at the Plant Branch CCR Ash Ponds between March 19, 2019 and March 20, 2019 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

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
SCS Plant Branch

						Analyses		
SDGs	***Field Identification***	***Collection Date***	***Lab Identification***	***Matrix***	***QC Samples***	***Select Metals (6020B)***	***Anions (300.0)***	***TDS (2540C)***
2616369	BRGWA-12S	03/19/19	2616369001	GW	-	X	X	X
2616369	BRGWA-12	03/19/19	2616369002	GW	-	X	X	X
2616369	BRGWA-27I	03/19/19	2616369003	GW	-	X	X	X
2616369	BRGWA-23S	03/19/19	2616369004	GW	-	X	X	X
2616369	BRGWA-47	03/19/19	2616369005	GW	-	X	X	X
2616369	EB-1	03/19/19	2616369006	WQ	EB	X	X	X
2616371	BRGWA-2S	03/19/19	2616371001	GW	-	X	X	X
2616371	BRGWA-2I	03/19/19	2616371002	GW	-	X	X	X
2616371	BRGWA-5S	03/19/19	2616371003	GW	-	X	X	X
2616371	BRGWA-5I	03/19/19	2616371004	GW	-	X	X	X
2616371	BRGWA-6S	03/19/19	2616371005	GW	-	X	X	X
2616371	BRGWC-17S	03/19/19	2616371006	GW	-	X	X	X
2616371	BRGWC-36S	03/19/19	2616371007	GW	-	X	X	X
2616371	FB-1	03/19/19	2616371008	WQ	FB	X	X	X
2616371	Dup-1	03/19/19	2616371009	WQ	FD (BRGWA-2I)	X	X	X
2616405	BRGWC-25I	03/20/19	2616405001	GW	-	X	X	X
2616405	BRGWC-29I	03/20/19	2616405002	GW	-	X	X	X
2616405	BRGWC-30I	03/20/19	2616405003	GW	-	X	X	X
2616405	BRGWC-32S	03/20/19	2616405004	GW	-	X	X	X
2616405	BRGWC-45	03/20/19	2616405005	GW	-	X	X	X
2616405	BRGWC-50	03/20/19	2616405006	GW	-	X	X	X
2616405	BRGWC-52I	03/20/19	2616405007	GW	-	X	X	X
2616405	Dup-2	03/20/19	2616405008	GW	FD (BRGWC-52I)	X	X	X
2616405	Dup-3	03/20/19	2616405009	GW	FD (BRGWC-25I)	X	X	X
2616405	FB-3	03/20/19	2616405010	WQ	FB	X	X	X
2616405	EB-2	03/20/19	2616405011	WQ	EB	X	X	X
2616405	EB-3	03/20/19	2616405012	WQ	EB	X	X	X
2616407	BRGWC-33S	03/20/19	2616407001	GW	-	X	X	X
2616407	BRGWC-34S	03/20/19	2616407002	GW	-	X	X	X
2616407	BRGWC-35S	03/20/19	2616407003	GW	-	X	X	X
2616407	BRGWC-37S	03/20/19	2616407004	GW	-	X	X	X
2616407	BRGWC-38S	03/20/19	2616407005	GW	-	X	X	X
2616407	FB-2	03/20/19	2616407006	WQ	FB	X	X	X

Abbreviations:
FB - Field blank
FD - Field duplicate
GW - Groundwater
EB - Equipment blank
TDS - Total dissolved solids
WQ - Water quality contol

TABLE 2
Qualifier Summary Table
SCS Plant Branch

SDG	*Sample Name*	*Constituent*	*New RL*	*New MDL*	*Qualifier*	*Reason*
2616369	BRGWA-23S	Total Dissolved Solids	-	-	J	Laboratory duplicate exceeded RPD lab goals for precision
2616369	BRGWA-12S	Total Dissolved Solids	-	-	J	Laboratory duplicate exceeded RPD lab goals for precision
2616369	BRGWA-12I	Total Dissolved Solids	-	-	J	Laboratory duplicate exceeded RPD lab goals for precision
2616369	BRGWA-27I	Total Dissolved Solids	-	-	J	Laboratory duplicate exceeded RPD lab goals for precision
2616369	BRGWA-47	Total Dissolved Solids	-	-	J	Laboratory duplicate exceeded RPD lab goals for precision
2616407	BRGWC-37S	Sulfate	-	0.39	U	Blank detection
2616407	BRGWC-37S	Total Dissolved Solids	68	68	U	Blank detection

Abbreviations:
MDL: Method detection limit
QC : Quality control
RL : Reporting limit
SDG : Sample delivery group
RPD: Relative percentage difference

Qualifiers:
J: Estimated result
U: Non-detect result

APPENDIX B

Statistical Analyses

Interwell Prediction Limit

Branch Client: Golder Associates Data: Plant Branch Ash Pond Printed 6/29/2019, 7:54 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**BRGWC-25I**	**0.068**	**n/a**	**3/20/2019**	**1.5**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-27I**	**0.068**	**n/a**	**3/19/2019**	**1.1**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-29I**	**0.068**	**n/a**	**3/20/2019**	**1.5**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-30I**	**0.068**	**n/a**	**3/20/2019**	**1.7**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-32S**	**0.068**	**n/a**	**3/20/2019**	**1.4**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-47**	**0.068**	**n/a**	**3/19/2019**	**0.41**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-52I**	**0.068**	**n/a**	**3/20/2019**	**1.6**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-50**	**0.068**	**n/a**	**3/20/2019**	**0.34**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Calcium (mg/L)	**BRGWC-25I**	**27.59**	**n/a**	**3/20/2019**	**53.95**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-27I**	**27.59**	**n/a**	**3/19/2019**	**60.2**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-29I**	**27.59**	**n/a**	**3/20/2019**	**55.4**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-30I**	**27.59**	**n/a**	**3/20/2019**	**141**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-32S**	**27.59**	**n/a**	**3/20/2019**	**52.8**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-45**	**27.59**	**n/a**	**3/20/2019**	**31.2**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-47**	**27.59**	**n/a**	**3/19/2019**	**335**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-52I**	**27.59**	**n/a**	**3/20/2019**	**40.85**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-50**	**27.59**	**n/a**	**3/20/2019**	**222**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Chloride (mg/L)	**BRGWC-25I**	**5.8**	**n/a**	**3/20/2019**	**6.3**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-32S**	**5.8**	**n/a**	**3/20/2019**	**7.3**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-45**	**5.8**	**n/a**	**3/20/2019**	**27.7**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-52I**	**5.8**	**n/a**	**3/20/2019**	**6.7**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-50**	**5.8**	**n/a**	**3/20/2019**	**23.5**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
pH (S.U)	**BRGWC-29I**	**6.775**	**5.418**	**3/20/2019**	**4.4**	**Yes**	**30**	**0**	**No**	**0.000...**	Param 1 of 2
pH (S.U)	**BRGWC-50**	**6.775**	**5.418**	**3/20/2019**	**5.32**	**Yes**	**30**	**0**	**No**	**0.000...**	Param 1 of 2
Sulfate (mg/L)	**BRGWC-25I**	**89**	**n/a**	**3/20/2019**	**235**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-27I**	**89**	**n/a**	**3/19/2019**	**199**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-29I**	**89**	**n/a**	**3/20/2019**	**278**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-30I**	**89**	**n/a**	**3/20/2019**	**623**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-32S**	**89**	**n/a**	**3/20/2019**	**409**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-45**	**89**	**n/a**	**3/20/2019**	**127**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-47**	**89**	**n/a**	**3/19/2019**	**1100**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-52I**	**89**	**n/a**	**3/20/2019**	**186.5**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-50**	**89**	**n/a**	**3/20/2019**	**1740**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-25I**	**225.2**	**n/a**	**3/20/2019**	**410.5**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-29I**	**225.2**	**n/a**	**3/20/2019**	**391**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-30I**	**225.2**	**n/a**	**3/20/2019**	**885**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-32S**	**225.2**	**n/a**	**3/20/2019**	**564**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-45**	**225.2**	**n/a**	**3/20/2019**	**302**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-52I**	**225.2**	**n/a**	**3/20/2019**	**360**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-50**	**225.2**	**n/a**	**3/20/2019**	**2280**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2

Interwell Prediction Limit

Branch Client: Golder Associates Data: Plant Branch Ash Pond Printed 6/29/2019, 7:54 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**BRGWC-25I**	**0.068**	**n/a**	**3/20/2019**	**1.5**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-27I**	**0.068**	**n/a**	**3/19/2019**	**1.1**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-29I**	**0.068**	**n/a**	**3/20/2019**	**1.5**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-30I**	**0.068**	**n/a**	**3/20/2019**	**1.7**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-32S**	**0.068**	**n/a**	**3/20/2019**	**1.4**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	3/20/2019	0.043	No	27	44.44	n/a	0.002308	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-47**	**0.068**	**n/a**	**3/19/2019**	**0.41**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-52I**	**0.068**	**n/a**	**3/20/2019**	**1.6**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Boron (mg/L)	**BRGWC-50**	**0.068**	**n/a**	**3/20/2019**	**0.34**	**Yes**	**27**	**44.44**	**n/a**	**0.002308**	NP (normality) 1 of 2
Calcium (mg/L)	**BRGWC-25I**	**27.59**	**n/a**	**3/20/2019**	**53.95**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-27I**	**27.59**	**n/a**	**3/19/2019**	**60.2**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-29I**	**27.59**	**n/a**	**3/20/2019**	**55.4**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-30I**	**27.59**	**n/a**	**3/20/2019**	**141**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-32S**	**27.59**	**n/a**	**3/20/2019**	**52.8**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-45**	**27.59**	**n/a**	**3/20/2019**	**31.2**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-47**	**27.59**	**n/a**	**3/19/2019**	**335**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-52I**	**27.59**	**n/a**	**3/20/2019**	**40.85**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Calcium (mg/L)	**BRGWC-50**	**27.59**	**n/a**	**3/20/2019**	**222**	**Yes**	**29**	**10.34**	**No**	**0.000...**	Param 1 of 2
Chloride (mg/L)	**BRGWC-25I**	**5.8**	**n/a**	**3/20/2019**	**6.3**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	BRGWC-27I	5.8	n/a	3/19/2019	5.8	No	29	0	n/a	0.002023	NP (normality) 1 of 2
Chloride (mg/L)	BRGWC-29I	5.8	n/a	3/20/2019	5.6	No	29	0	n/a	0.002023	NP (normality) 1 of 2
Chloride (mg/L)	BRGWC-30I	5.8	n/a	3/20/2019	5.8	No	29	0	n/a	0.002023	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-32S**	**5.8**	**n/a**	**3/20/2019**	**7.3**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-45**	**5.8**	**n/a**	**3/20/2019**	**27.7**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	BRGWC-47	5.8	n/a	3/19/2019	4.7	No	29	0	n/a	0.002023	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-52I**	**5.8**	**n/a**	**3/20/2019**	**6.7**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Chloride (mg/L)	**BRGWC-50**	**5.8**	**n/a**	**3/20/2019**	**23.5**	**Yes**	**29**	**0**	**n/a**	**0.002023**	NP (normality) 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	3/20/2019	0.17	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	3/19/2019	0.2	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	3/20/2019	0.091	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	3/20/2019	0.31	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	3/20/2019	0.029ND	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	3/20/2019	0.066	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	3/19/2019	0.029ND	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	3/20/2019	0.135	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	3/20/2019	0.21	No	27	55.56	n/a	0.002308	NP (NDs) 1 of 2
pH (S.U)	BRGWC-25I	6.775	5.418	3/20/2019	6.03	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	BRGWC-27I	6.775	5.418	3/19/2019	5.75	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	**BRGWC-29I**	**6.775**	**5.418**	**3/20/2019**	**4.4**	**Yes**	**30**	**0**	**No**	**0.000...**	Param 1 of 2
pH (S.U)	BRGWC-30I	6.775	5.418	3/20/2019	6.24	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	BRGWC-32S	6.775	5.418	3/20/2019	5.88	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	BRGWC-45	6.775	5.418	3/20/2019	6.1	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	BRGWC-47	6.775	5.418	3/19/2019	5.89	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	BRGWC-52I	6.775	5.418	3/20/2019	6.59	No	30	0	No	0.000...	Param 1 of 2
pH (S.U)	**BRGWC-50**	**6.775**	**5.418**	**3/20/2019**	**5.32**	**Yes**	**30**	**0**	**No**	**0.000...**	Param 1 of 2
Sulfate (mg/L)	**BRGWC-25I**	**89**	**n/a**	**3/20/2019**	**235**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-27I**	**89**	**n/a**	**3/19/2019**	**199**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-29I**	**89**	**n/a**	**3/20/2019**	**278**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-30I**	**89**	**n/a**	**3/20/2019**	**623**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-32S**	**89**	**n/a**	**3/20/2019**	**409**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2

Interwell Prediction Limit

Branch Client: Golder Associates Data: Plant Branch Ash Pond Printed 6/29/2019, 7:54 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Sulfate (mg/L)	**BRGWC-45**	**89**	**n/a**	**3/20/2019**	**127**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-47**	**89**	**n/a**	**3/19/2019**	**1100**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-52I**	**89**	**n/a**	**3/20/2019**	**186.5**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Sulfate (mg/L)	**BRGWC-50**	**89**	**n/a**	**3/20/2019**	**1740**	**Yes**	**29**	**3.448**	**n/a**	**0.002023**	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-25I**	**225.2**	**n/a**	**3/20/2019**	**410.5**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-27I	225.2	n/a	3/19/2019	334	No	29	0	No	0.000...	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-29I**	**225.2**	**n/a**	**3/20/2019**	**391**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-30I**	**225.2**	**n/a**	**3/20/2019**	**885**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-32S**	**225.2**	**n/a**	**3/20/2019**	**564**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-45**	**225.2**	**n/a**	**3/20/2019**	**302**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-47	225.2	n/a	3/19/2019	2050	No	29	0	No	0.000...	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-52I**	**225.2**	**n/a**	**3/20/2019**	**360**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2
Total Dissolved Solids (mg/L)	**BRGWC-50**	**225.2**	**n/a**	**3/20/2019**	**2280**	**Yes**	**29**	**0**	**No**	**0.000...**	Param 1 of 2

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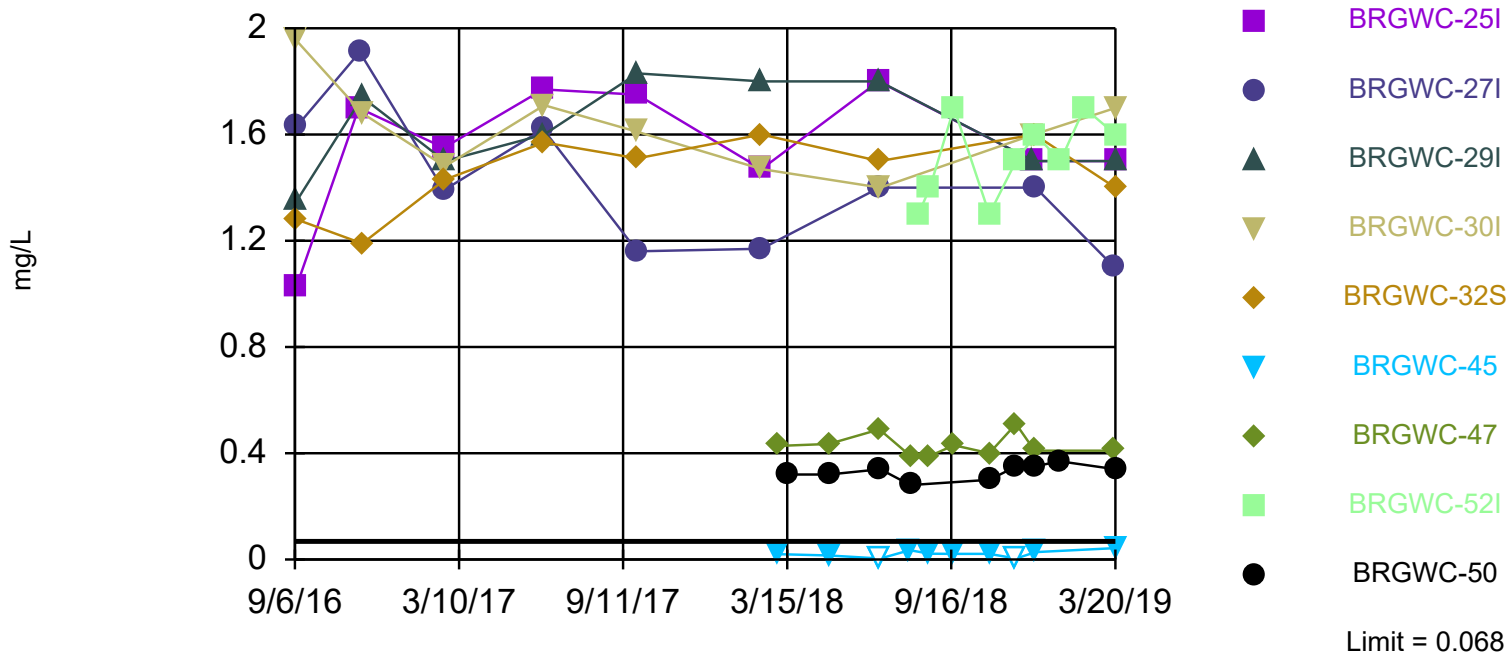
Prediction Limit

Interwell Non-parametric

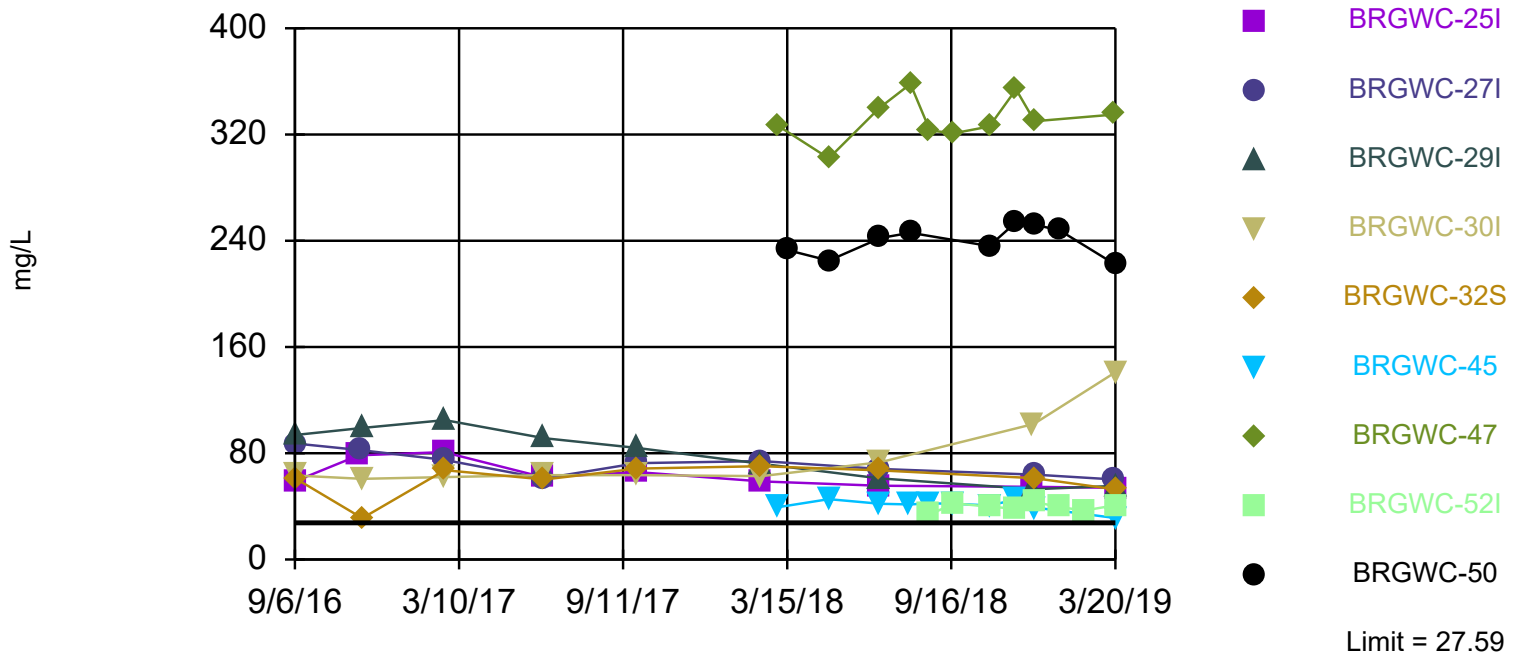


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 27 background values. 44.44% NDs. Annual per-constituent alpha = 0.04074. Individual comparison alpha = 0.002308 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 6/29/2019 7:53 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

Prediction Limit

Interwell Parametric

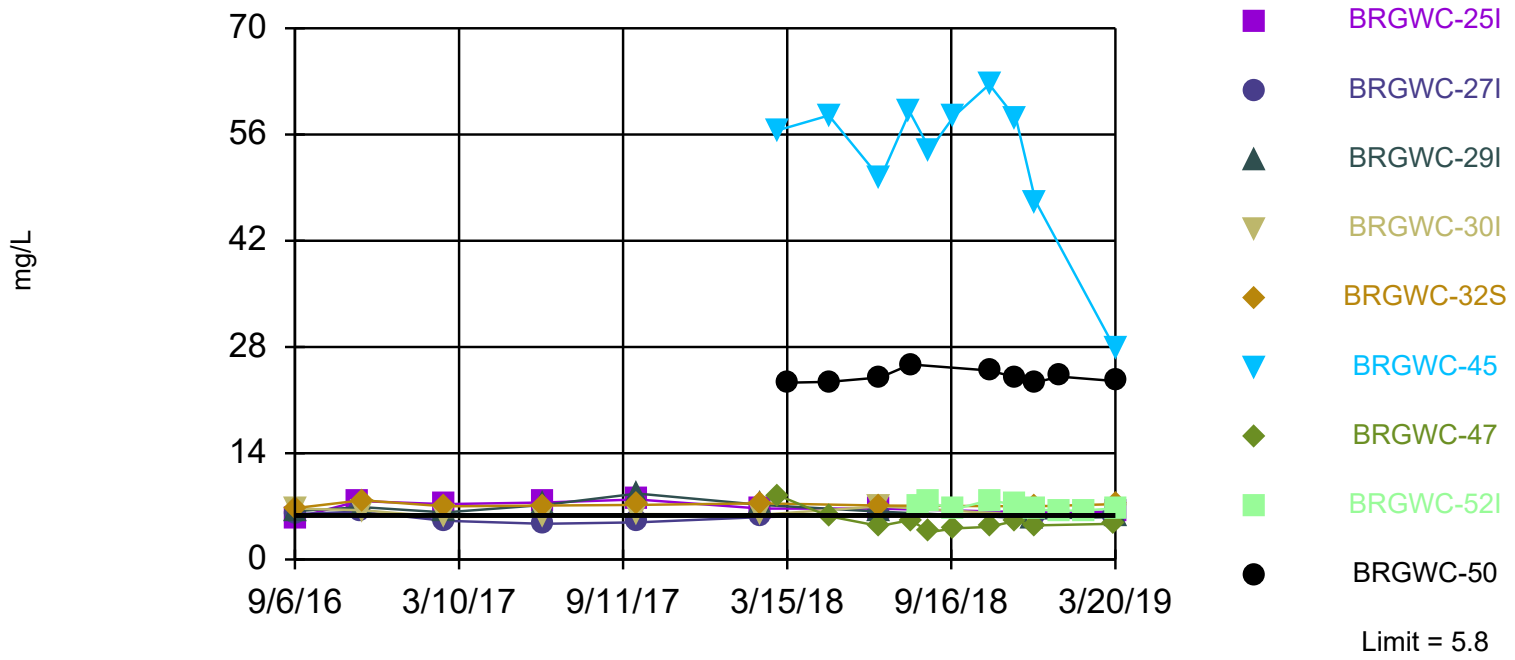


Background Data Summary: Mean=13.47, Std. Dev.=6.69, n=29, 10.34% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9058, critical = 0.898. Kappa = 2.11 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0008358. Comparing 9 points to limit.

Constituent: Calcium Analysis Run 6/29/2019 7:53 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 29 background values. Annual per-constituent alpha = 0.03579. Individual comparison alpha = 0.002023 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 6/29/2019 7:53 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

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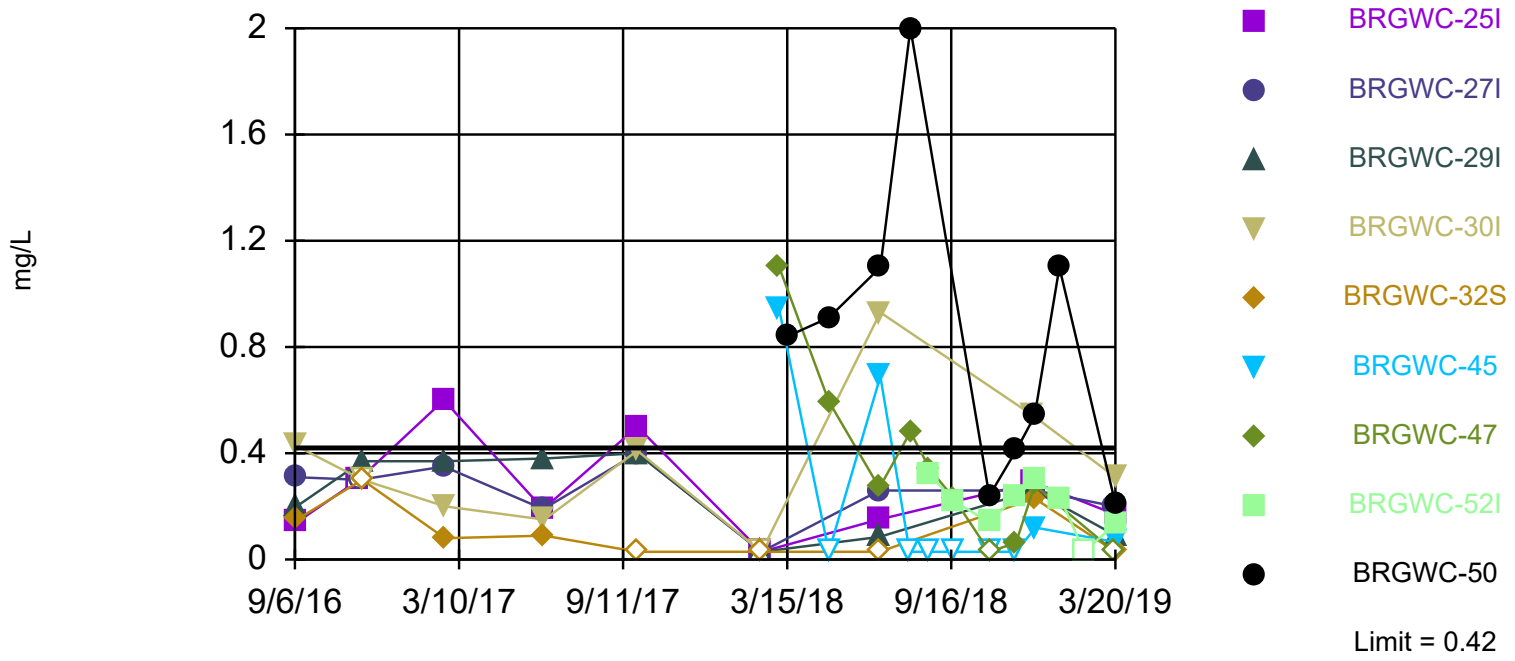
Prediction Limit

Interwell Non-parametric

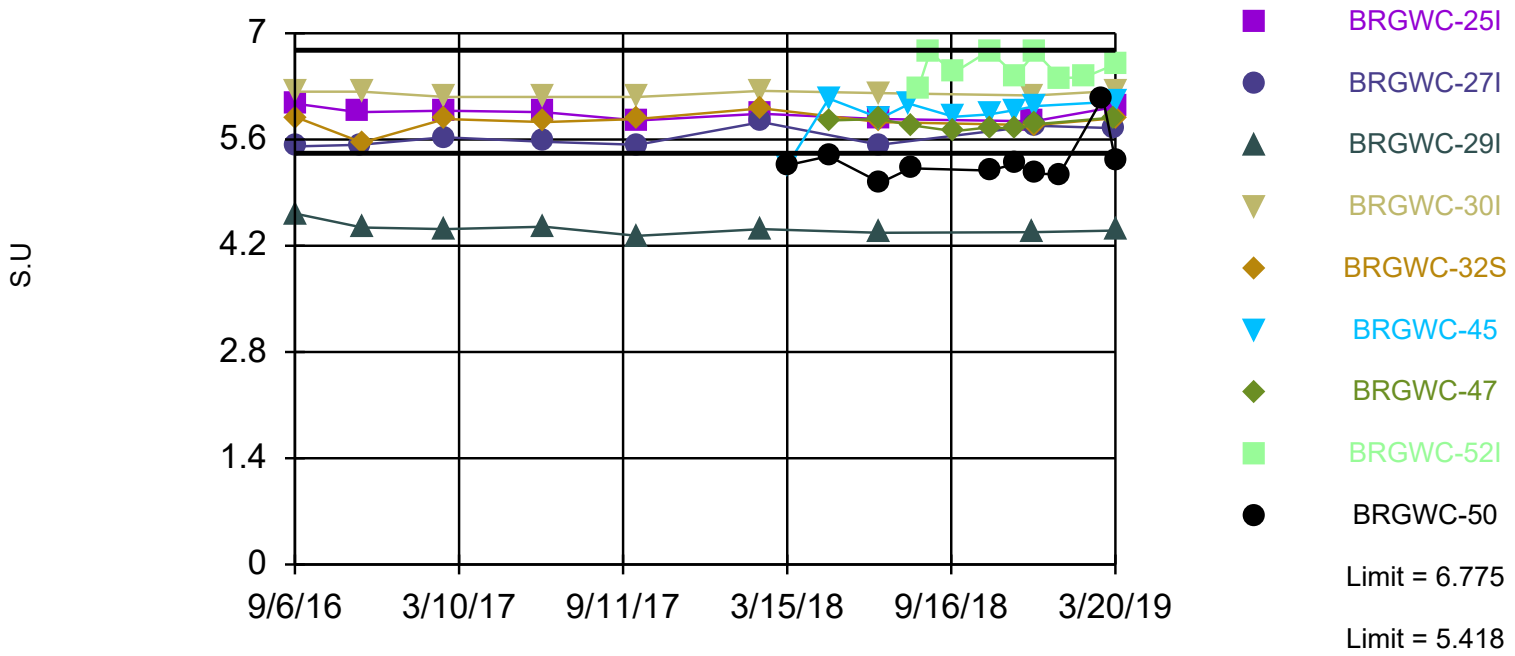


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 27 background values. 55.56% NDs. Annual per-constituent alpha = 0.04074. Individual comparison alpha = 0.002308 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 6/29/2019 7:53 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

Prediction Limit

Interwell Parametric



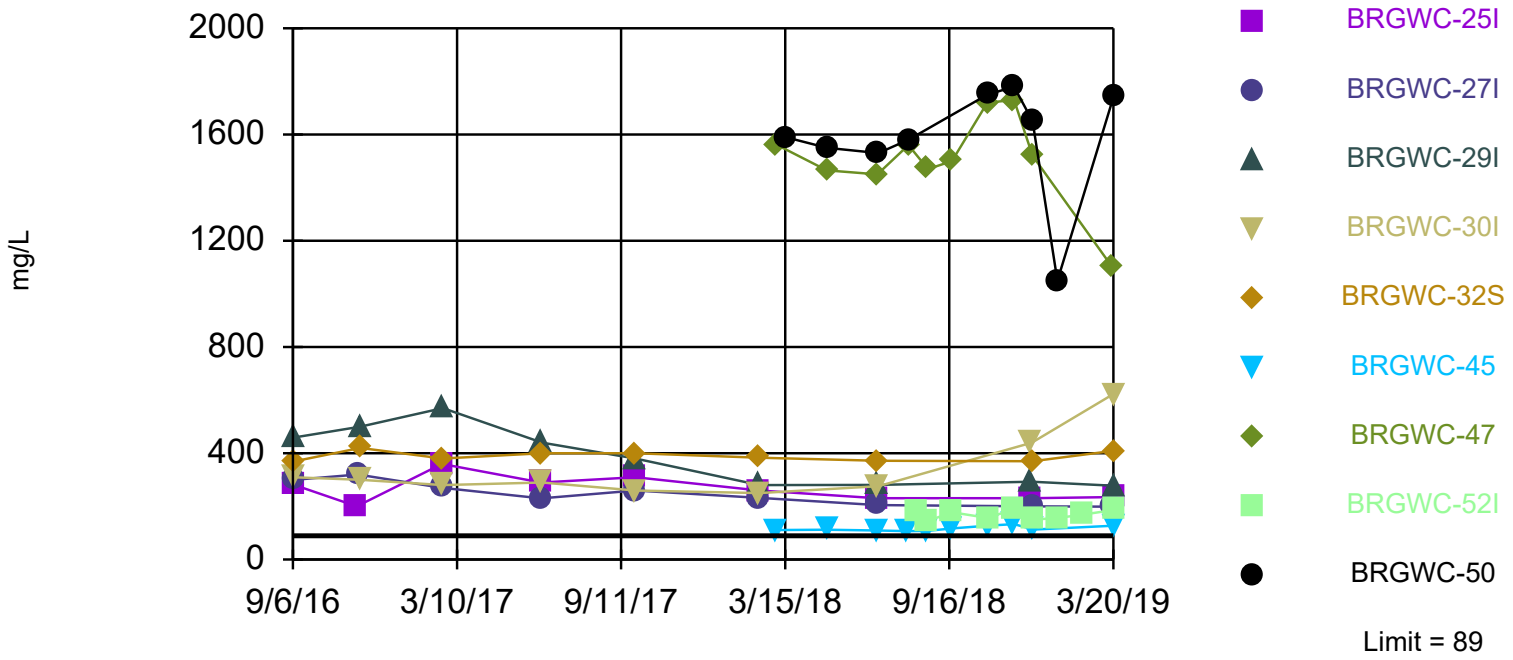
Background Data Summary: Mean=6.097, Std. Dev.=0.3233, n=30. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9605, critical = 0.9. Kappa = 2.099 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004179. Comparing 9 points to limit.

Constituent: pH Analysis Run 6/29/2019 7:54 PM View: Pond BCD Appendix III

Branch Client: Golder Associates Data: Plant Branch Ash Pond

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 29 background values. 3.448% NDs. Annual per-constituent alpha = 0.03579. Individual comparison alpha = 0.002023 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 6/29/2019 7:54 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

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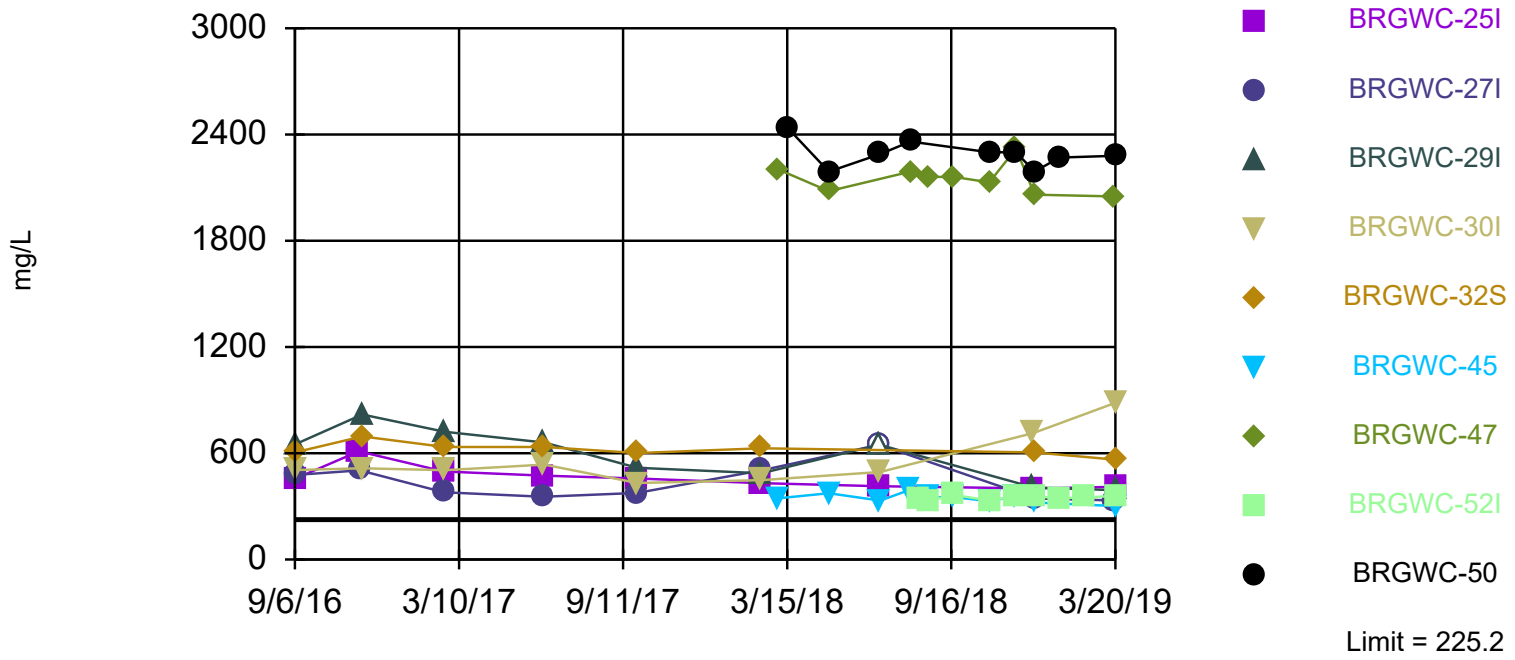
Prediction Limit

Interwell Parametric



Background Data Summary: Mean=127.6, Std. Dev.=46.31, n=29. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9532, critical = 0.898. Kappa = 2.11 (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: Total Dissolved Solids Analysis Run 6/29/2019 7:54 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

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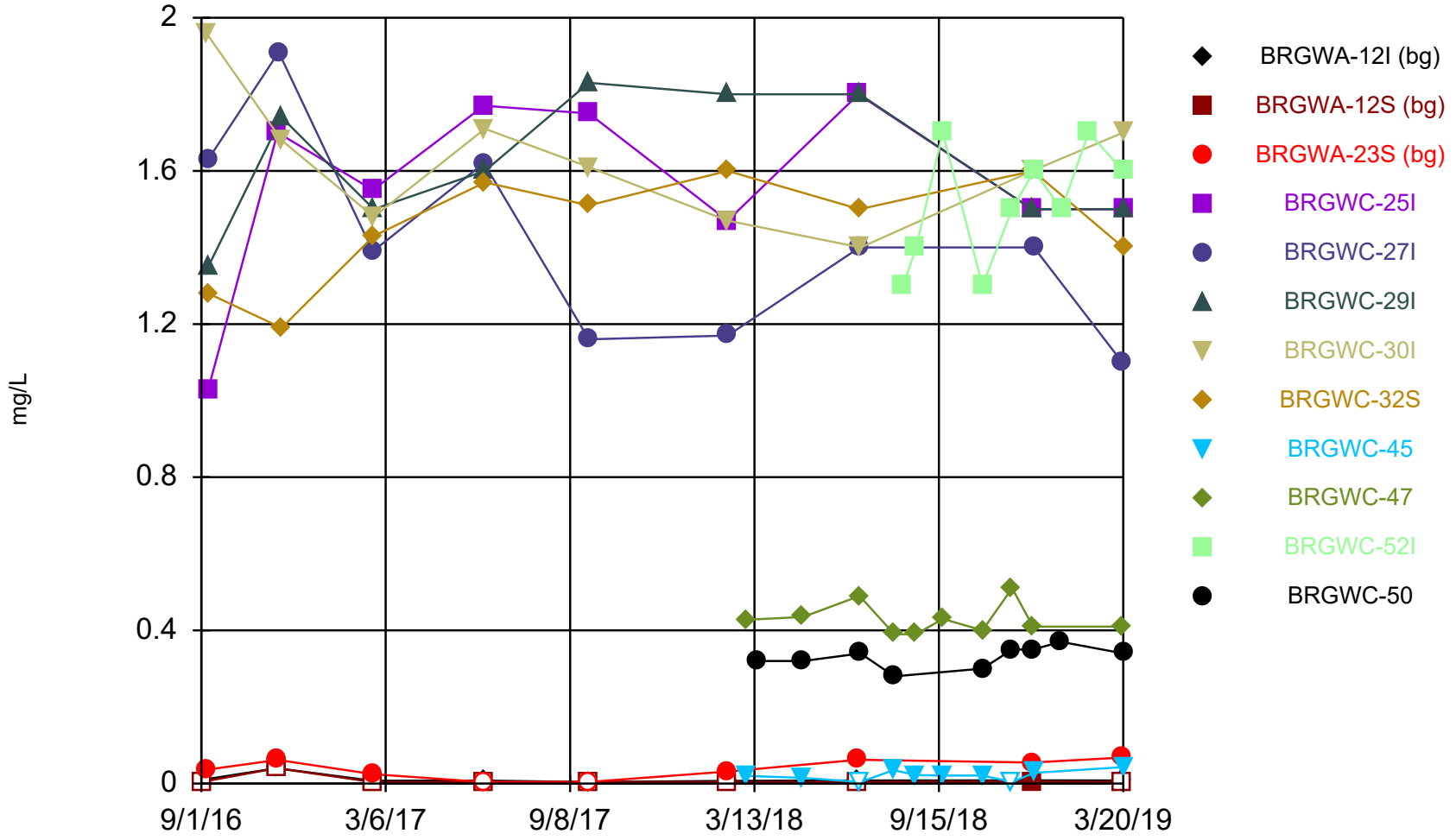
Hollow symbols indicate censored values.

Time Series



Constituent: Boron Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III

Branch Client: Golder Associates Data: Plant Branch Ash Pond

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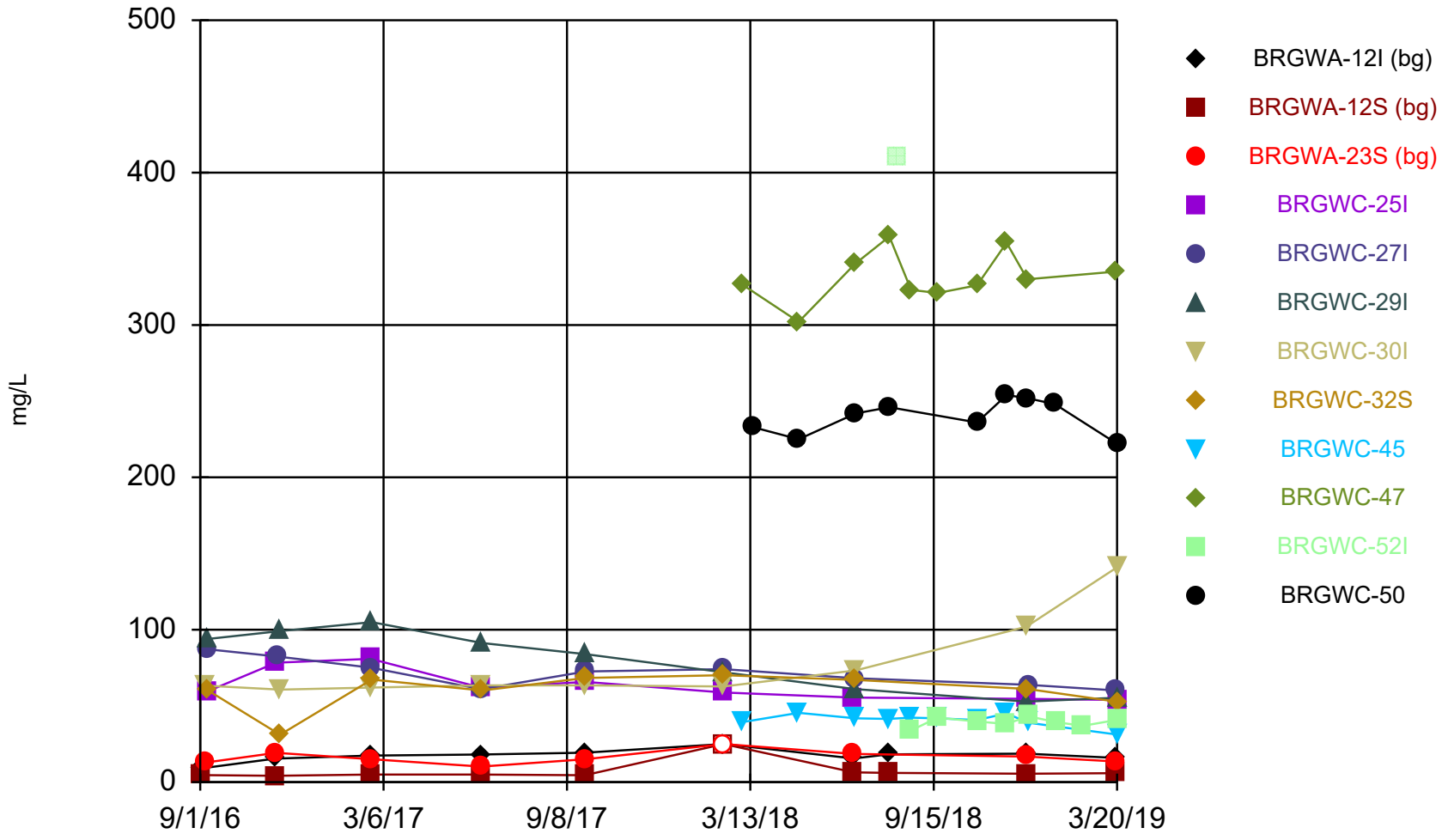
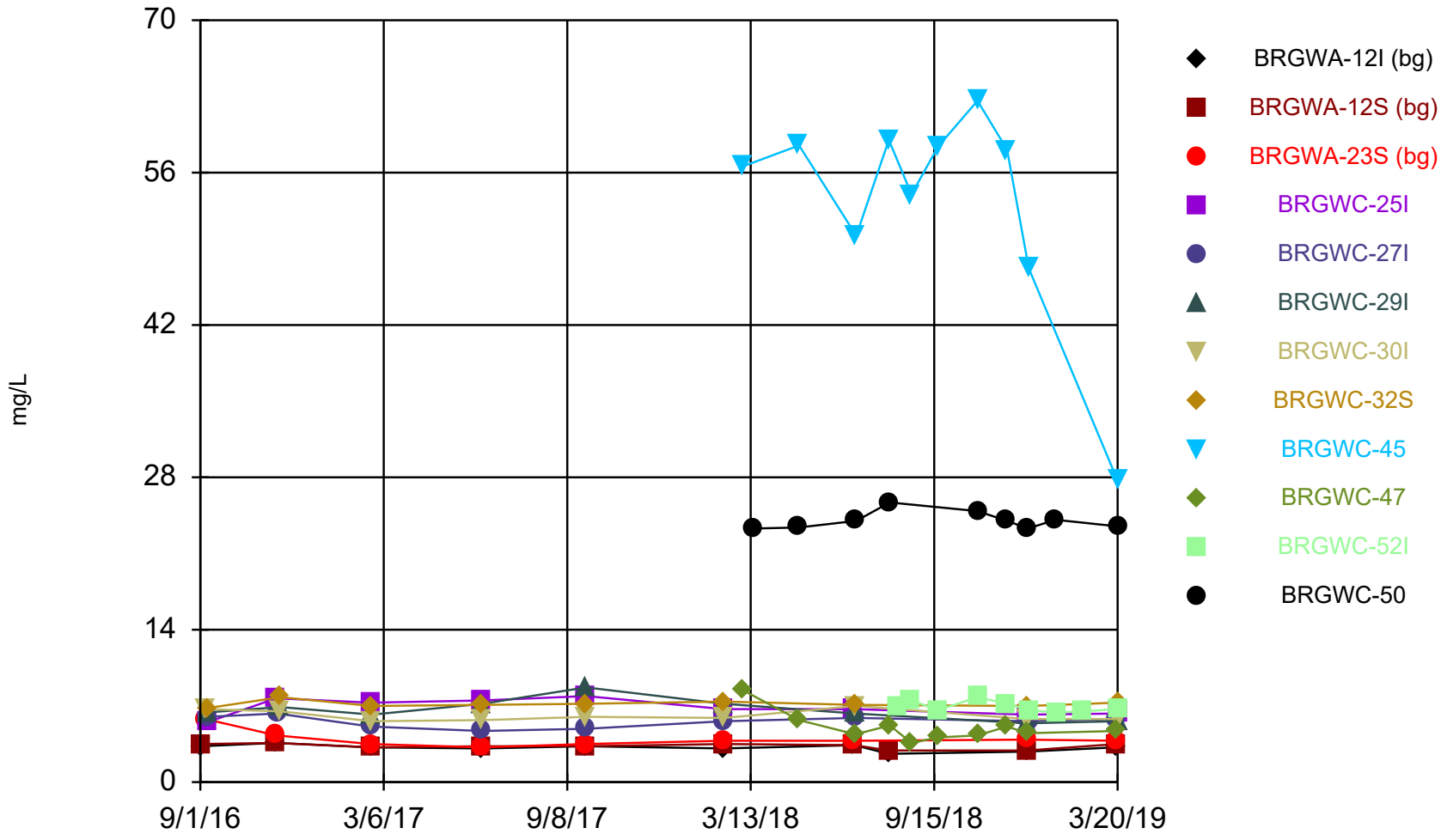
Hollow symbols indicate censored values.

Time Series



Constituent: Calcium Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

Time Series



Constituent: Chloride Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

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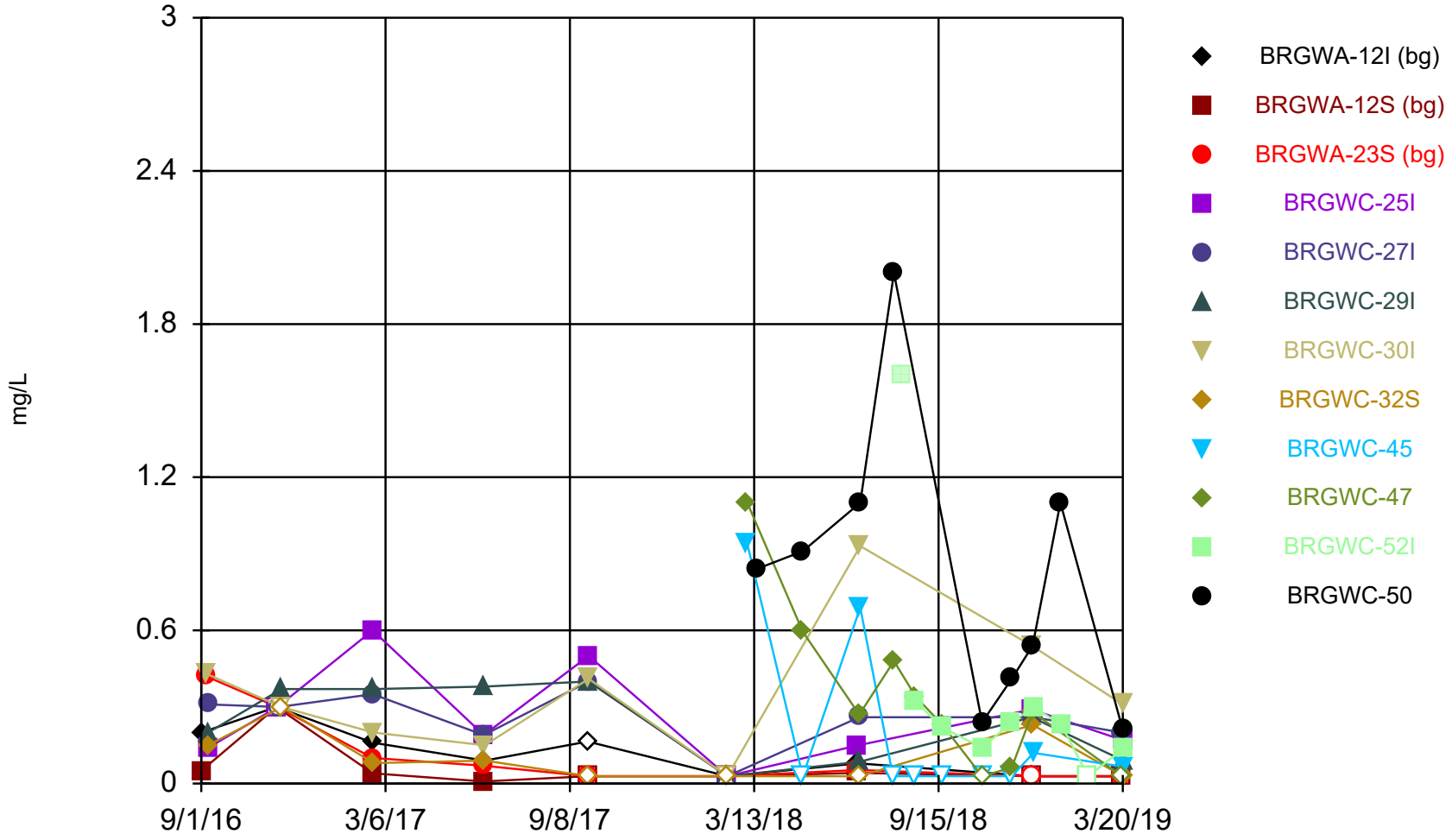
Hollow symbols indicate censored values.

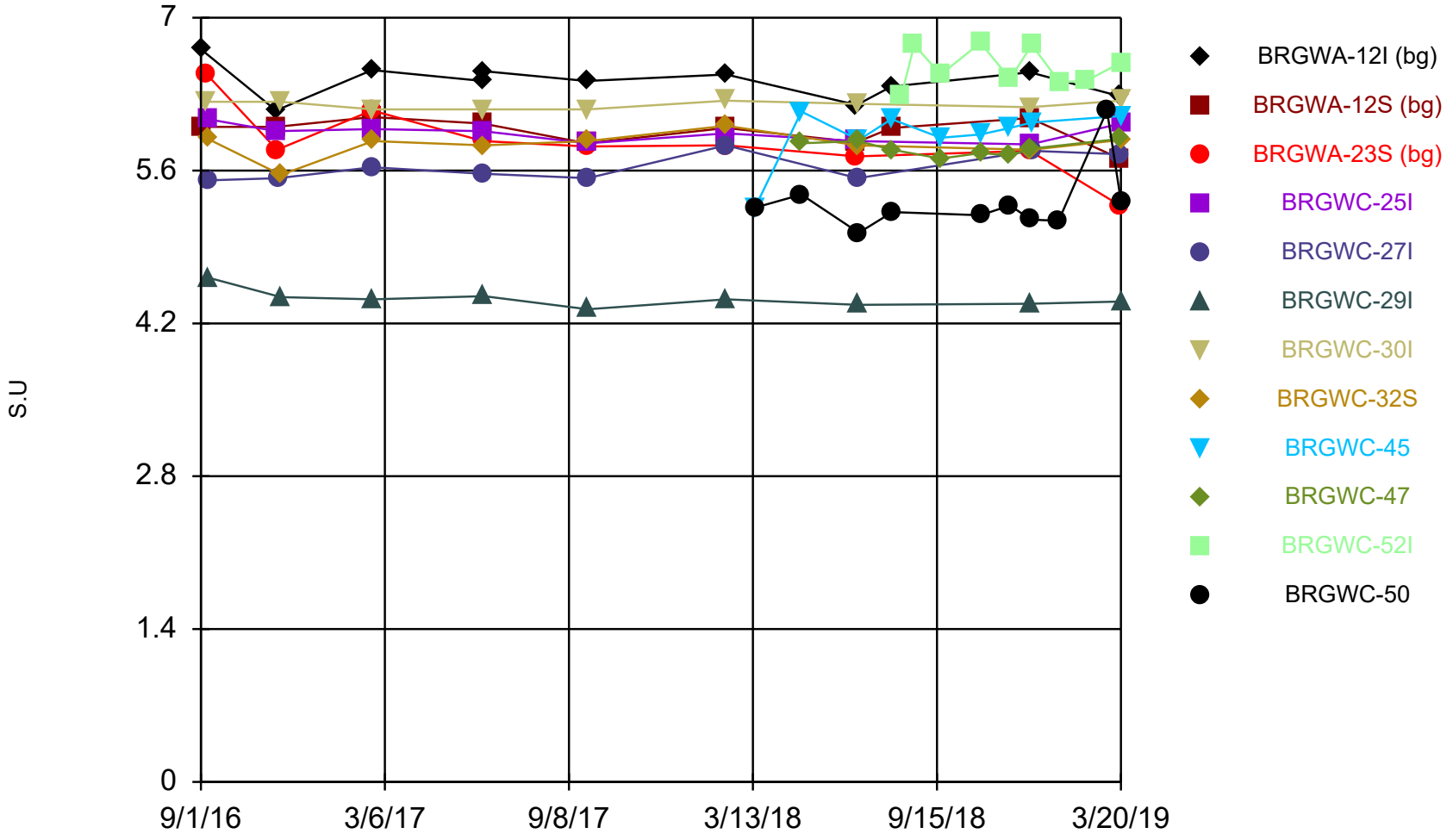
Time Series



Constituent: Fluoride Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III

Branch Client: Golder Associates Data: Plant Branch Ash Pond

Time Series



Constituent: pH Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III

Branch Client: Golder Associates Data: Plant Branch Ash Pond

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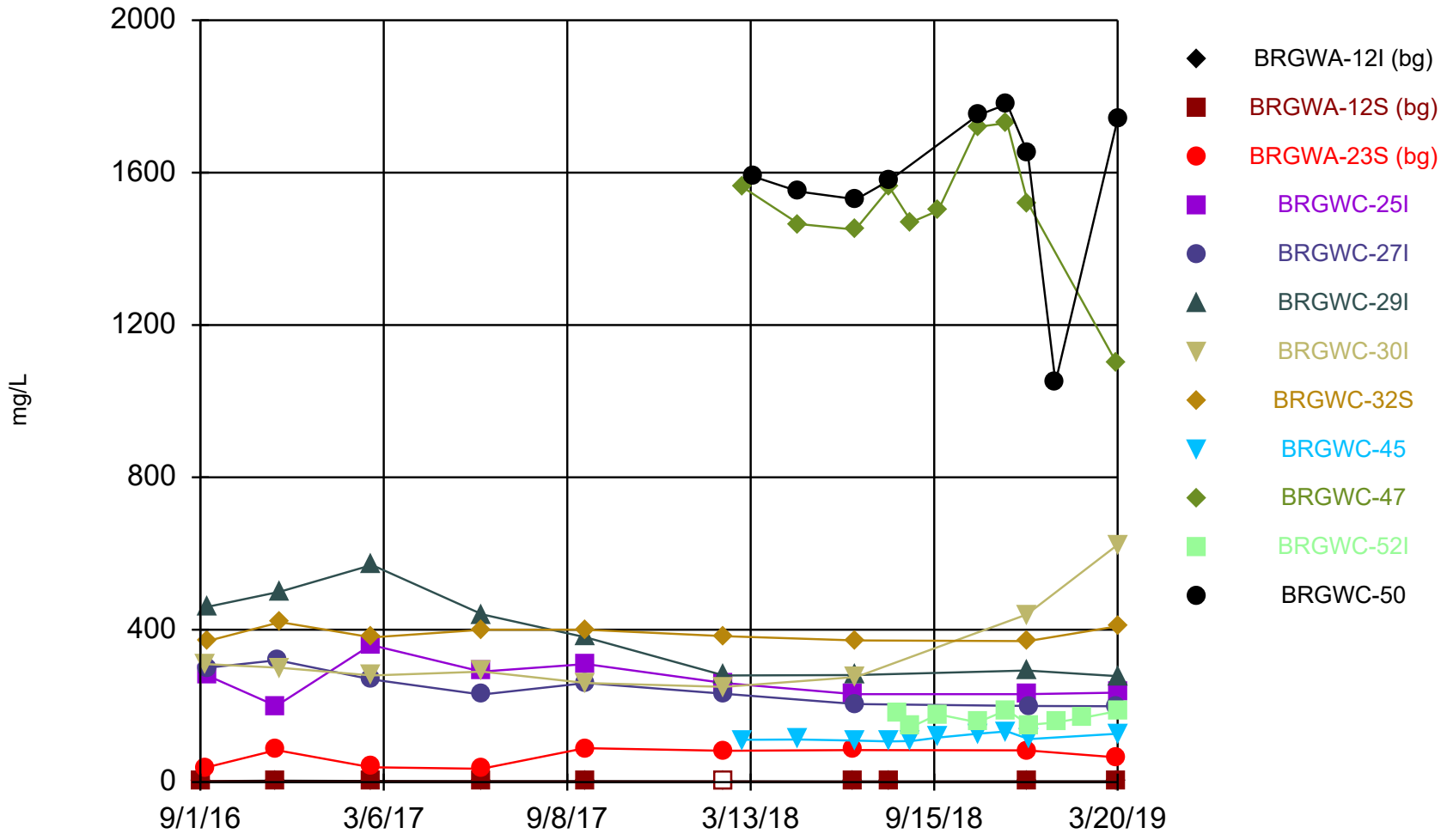
Hollow symbols indicate censored values.

Time Series

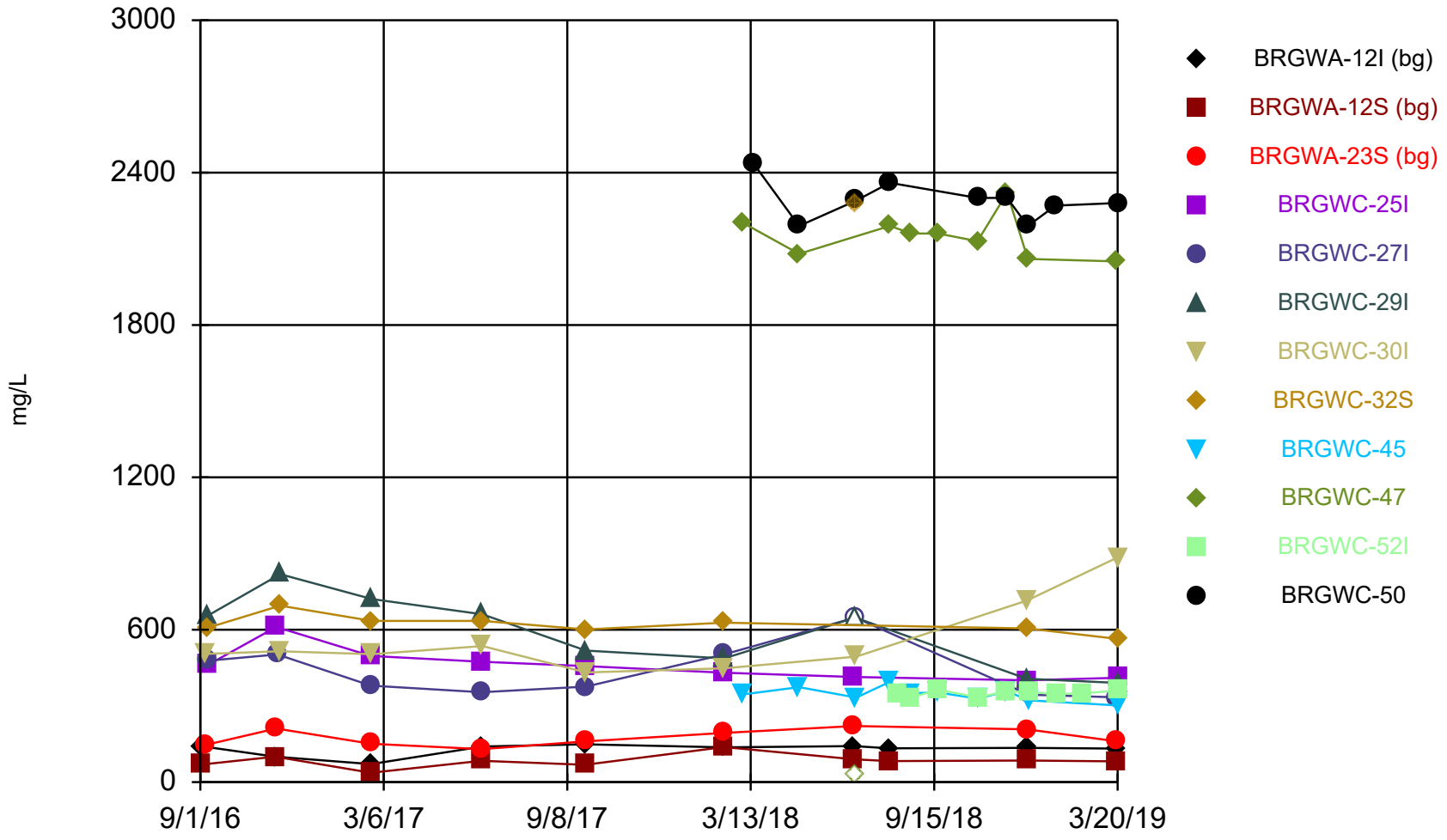


Constituent: Sulfate Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III

Branch Client: Golder Associates Data: Plant Branch Ash Pond

Sanitas™ v.9.6.18 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Total Dissolved Solids Analysis Run 6/29/2019 7:49 PM View: Pond BCD Appendix III Branch Client: Golder Associates Data: Plant Branch Ash Pond

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