Prepared for

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

2018 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

GEORGIA POWER COMPANY
PLANT BOWEN
ASH POND 1 (AP-1)

Prepared by

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581C

January 2019

Geosyntec
consultants

CERTIFICATION STATEMENT

This 2018 *Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant Bowen – Ash Pond 1 (AP-1)* has been prepared in accordance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 under the supervision of a licensed professional engineer with Geosyntec Consultants.

Whitney Law
Georgia Professional Engineer No. 36641

1/31/2019
Date

Geosyntec consultants

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LIST OF ACRONYMS

AP	Ash Pond
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
cm/s	Centimeters per Second
DO	Dissolved Oxygen
EPD	Environmental Protection Division
ft AMSL	Feet Above Mean Sea Level
ft/d	Feet per Day
ft/ft	Feet per Foot
GPC	Georgia Power Company
GWPS	Groundwater Protection Standard
K_h	Horizontal Hydraulic Conductivity
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric Turbidity Units
ORP	Oxidation-Reduction Potential
PE	Professional Engineer
QA/QC	Quality Assurance/Quality Control
SCS	Southern Company Services
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
SM	Standard Method
s.u.	Standard Unit
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D] and the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management 391-3-4-.10, this *2018 Annual Groundwater Monitoring and Corrective Action Report* documents the 2018 groundwater monitoring activities conducted at Georgia Power Company (GPC) Plant Bowen CCR Ash Pond (AP), AP-1, (Site). Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a) adopt Federal CCR rule by reference, references to the Federal CCR rule herein also apply to the Georgia EPD rules. This report documents semiannual monitoring activities completed through the 2018 calendar year in accordance with 40 CFR §257.90(e).

1.1 Site Description and Background

Plant Bowen is a four-unit, coal-fired, electric-generating facility located nine miles southwest of Cartersville in Bartow County, Georgia. The Site is bordered by the Etowah River to the north and east, and Euharlee Creek to the northwest and west (**Figure 1**). Plant Bowen commenced commercial operations in the early 1970s and can produce 3,376 megawatts of electricity. CCR resulting from power generation has historically been transferred and stored at ash pond AP-1, which is located adjacent to and west of the electric-generating facility.

Operation of AP-1 commenced in 1971 with receipt of sluiced CCR material from Plant Bowen. In 2008, GPC began operation of a new CCR monofill at Plant Bowen, decreasing substantially the volume of CCR processing at AP-1. Much of the CCR material sluiced to AP-1 is dewatered before being transported to the monofill for disposal. GPC is currently in the permitting process to close AP-1 by consolidating the excavated CCR material into a fully-contained engineered structure using advanced engineering methods.

1.2 Regional Geology & Hydrogeologic Setting

The following section presents the geologic and hydrogeologic conditions for the Site.

1.2.1 Regional and Site Geology

AP-1 is located in the Valley and Ridge Physiographic Province of northwest Georgia, which is characterized by Paleozoic sedimentary rocks that have been folded and faulted

into the ridges and valleys that gave this region its name. The floor of the valley is underlain by shales, dolomites, and limestones of Cambrian and Ordovician age. Geologic mapping performed by Lawton et al. (1976) indicates that the Site is underlain by the Ordovician-Cambrian age Knox Dolomite and the Ordovician age Newala Limestone. Based on review of subsurface investigations at the Site, the bedrock is described as predominantly dolomite. AP-1 is underlain primarily by residuum and competent dolomite/limestone bedrock.

Based on subsurface investigations, the residuum at the Site is the result of in-place weathering of the underlying dolomite/limestone bedrock. The residuum consists mainly of mottled light brown to red to yellow, low to high plasticity, stiff to very stiff clay, silt, and silty clay. Most soils contain varying amounts of black chert nodules and chert gravel. The bedrock at the Site is described as light to dark gray, fine to medium-grained, thinly-bedded to massive, dense, and hard dolomite, limestone, and dolomitic limestone. Some evidence of weathering along fracture or bedding surfaces is observed, with some manganese or iron oxide staining. Abundant calcite veins and occasional zones of healed dolomite breccia are observed throughout the bedrock. Solution cavities or voids in the underlying limestone/dolomite bedrock form over geological timeframes along pre-existing discontinuities such as joints and bedding planes. At the Site, these cavities are typically filled with sediment from the in-place weathering of the bedrock or the downward migration of the overlying residuum, but they may also be open, or water filled. When hydraulically interconnected they may create preferential groundwater flow paths across the Site.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at AP-1 is a regional groundwater aquifer that occurs in the residuum and fractured and solutioned bedrock. Under natural conditions, the potentiometric surface would be expected to be a subdued reflection of the surface topography; groundwater generally flows in a northwesterly and westerly/southwesterly direction in vicinity of AP-1. Groundwater recharge is by precipitation falling onto outcrop areas and then percolating through the residuum to bedrock. Groundwater flow in bedrock is under unconfined to semi-confined conditions from the mantle of overlying lower-permeability residuum and is controlled by secondary porosity along fractures and solution-enhanced features. Based on observations of residuum soil types and horizontal conductivity values, the movement of groundwater in the residuum and highly-weathered upper surface of the bedrock is slow and more characteristic of porous media flow than secondary porosity (fracture) flow. Groundwater flow in the underlying

dolomite/limestone bedrock is likely controlled by preferential flow pathways associated with fractures and solution-enhanced joints and fissures.

1.3 Groundwater Monitoring Well Network

In accordance with 40 CFR §257.91, a groundwater monitoring system was installed that (1) consists of a sufficient number of wells; (2) is installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer; and (3) represents the groundwater quality both upgradient of the units (i.e., background conditions) and passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions. The well network was certified by a professional engineer (PE) on October 10, 2017; the certification is maintained in the facility's Operating Record.

The original certified compliance monitoring well network consisted of 30 wells installed between October 2015 and January 2017. Eleven of the thirty wells are no longer sampled as part of the certified monitoring well network due to well replacement, proximity to closure activities, or modification to the certified well network. The current certified compliance monitoring well network consists of 19 wells; two locations monitor upgradient groundwater quality conditions, with 17 wells monitoring conditions downgradient of AP-1. The spatial distribution of the well networks used to assess groundwater quality and water level elevations at the Site are presented on **Figure 2**. The well construction details are listed in **Table 1**.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with 40 CFR §257.90(e), the following describes monitoring-related activities performed in 2018 and discusses any change in status of the monitoring program. All groundwater sampling was performed in accordance with 40 CFR §257.93. Samples were collected from each well in the certified monitoring system. The location of each of these monitoring wells is shown on **Figure 2**.

Table 2, *Groundwater Sampling Event Summary for 2018*, presents a summary of groundwater sampling events completed for AP-1. Groundwater sampling events were conducted for AP-1 during March 2018, June 2018, and October 2018. During the March 2018 sampling event, groundwater samples were collected and analyzed for Appendix IV to meet the requirement of 40 CFR §257.95(b). During each of the June and October 2018 semi-annual sampling events, groundwater samples were collected for both Appendix III and the Appendix IV constituents detected during the March 2018 event at each detection monitoring well. Results of sampling activities conducted in 2018 are presented in **Appendix A**, *Analytical Results and Field Sampling Forms.*

2.1 Monitoring Well Installation and Maintenance

In accordance with 40 CFR §257.91, 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 40 CFR §257.91(a). In summary, monitoring well-related activities in 2018 included the following:

- Visual inspection of well conditions prior to sampling, recording Site conditions, and performing exterior maintenance to perform sampling under safe and clean conditions; and

- Installation of six piezometers to characterize groundwater conditions.

The locations of the additional six piezometers are shown on **Figure 2**, with relevant piezometer construction details provided in **Table 1**. Details regarding the installation of these piezometers, including boring and installation logs, will be documented in the facility Operating Record pursuant to 40 CFR §257.93(e)(1).

2.2 Assessment Monitoring

Appendix III constituents exhibited statistically significant increases (SSIs) over background during the first detection monitoring event conducted in October 2017. Analytical results and statistical evaluation of those results were provided in the *2017 Annual Groundwater and Corrective Action Monitoring Report* (Anchor, 2018). An assessment monitoring program was initiated. The 19 monitoring wells of the certified compliance monitoring well network (**Figure 2**) were sampled for Appendix IV parameters in March 2018 as the initial assessment monitoring event. An Assessment Monitoring Program Notification was prepared for AP-1 on May 15, 2018, pursuant to 40 CFR §257.94(e)(3) and placed in the Operating Records as required by 40 CFR §257.105(h)(5).

Pursuant to 40 CFR §257.95(d)(1), the AP-1 compliance well network was resampled within 90 days of receiving the March 2018 data, occurring June 12 – 15, 2018. The groundwater samples were analyzed for Appendix III parameters and the following Appendix IV constituents that were detected during the March 2018 event: arsenic, barium, cadmium, cobalt, fluoride, lithium, molybdenum, thallium, combined radium 226 /228. The June 2018 sampling event served as the first of two semiannual groundwater assessment monitoring events conducted in 2018, as required by 40 CFR §257.95(d)(1). The second event was conducted October 16 – 22, 2018. The sequence of assessment monitoring events conducted at AP-1 in 2018 is summarized in **Table 2**. Details of these events and analytical results are discussed in Section 3, while the statistical results are discussed in Section 4.

2.3 Additional Well Installation & Groundwater Sampling

To further characterize site hydrogeology and groundwater flow conditions, piezometer BGWC-31, BGWC-32, BGWA-33, BGWC-34D, BGWC-35D, and BGWC-36D were installed July 2 – 18, 2018. The number, spacing, and depths of the six new piezometers were selected based on the characterization of site-specific hydrogeologic conditions and designed to monitor the uppermost water-bearing zone primarily in the residuum and the highly weathered and deeper fractured bedrock. Electrical resistivity imaging and spontaneous potential geophysical surveys conducted by S&ME in 2015 and GEL Geophysics in 2018 were also reviewed to assess subsurface areas of potential preferential flow paths to aid piezometer placement.

Groundwater samples were collected from the following six piezometers during October and November 2018: BGWC-31, BGWC-32, BGWC-34D, BWC-35D, BGWC-36D, and

BGWA-6. The field logs and laboratory reports associated with the October and November 2018 sampling events are included in **Appendix A**.

3.0 SAMPLING METHODOLOGY & ANALYSES

The following section presents a summary of the field sampling procedures that were implemented and the groundwater sampling results that were obtained in connection with the assessment monitoring program conducted at the Site in 2018.

3.1 Groundwater Level Measurement

Prior to the June and October 2018 sampling events, a synoptic round of depth-to-groundwater-level measurements were recorded from the Site's wells and piezometers and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The April 8, 2018 data presented in **Table 3** were recorded within two weeks of the March 2018 sampling event. The groundwater elevations, averaged for the three events, range from 688.70 feet above mean sea level (ft AMSL) in monitoring well BGWC-24 to 639.30 ft AMSL in monitoring well BGWC-14. The greatest seasonal variability of the groundwater elevations was observed between the April and October data, with April elevations averaging 4.07 feet higher.

The groundwater elevation data were used to prepare potentiometric surface maps for April, June, and October 2018, which are presented on **Figures 3, 4**, and **5**, respectively. Groundwater flow pathways at the Site are expected to be influenced by solution features, fractures, and weathered zones in the upper bedrock. Interpretation of the potentiometric surface contours indicates that groundwater generally flows to the north and northwest. A component of flow in the southernmost portion of AP-1 is to the south and west, likely due to groundwater mounding related to historical free water storage at the recycle pond (now decommissioned).

3.2 Groundwater Gradient and Flow Velocity

The groundwater hydraulic gradients within the residuum and fractured and solutioned bedrock of the uppermost aquifer beneath AP-1 were calculated using groundwater elevation data recorded in April, June, and October 2018, and along three main interpreted groundwater flow paths to account for changing flow directions across the Site, as discussed in Section 3.1 (i.e., northwest, west, south/southwest). The supporting calculations are presented in **Table 4**; the locations of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figures 3, 4**, and **5**.

The calculated hydraulic gradient along the northwest, west, and south/southwest flow paths are 0.015 feet per foot (ft/ft), 0.023 ft/ft, and 0.021 ft/ft, respectively. These hydraulic gradients represent the calculated average of the April, June, and October 2018 events.

The approximate horizontal flow velocities along the northwest, west, and south/southwest flow paths were calculated using the following derivative of Darcy's Law. The calculations are presented on **Table 4**.

$$V = \frac{K * i}{n_e}$$

Where:

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

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

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

n_e = Effective porosity

Because the geologic conditions at AP-1 are not homogenous or isotropic, and that the flow pathways are influenced by solution features, fractures, and weathered zones in the upper bedrock, groundwater flow velocities are variable. Horizontal hydraulic conductivity (K_h) values for the residuum were reported by Southern Company Services (SCS) (SCS, 2002) to range from 1 x 10^{-6} to 1 x 10^{-8} centimeters per second (cm/s). Horizontal hydraulic conductivity values measured for bedrock ranged from 2.1 x 10^{-5} cm/s to 1.0 x 10^{-2} cm/s, with a geometric mean of 8.6 x 10^{-4} cm/s [2.44 feet per day (ft/d)]. To be conservative, the flow velocities were calculated using the geometric mean K_h for weathered/fractured bedrock. Also, an estimated effective porosity of 0.3 or 30% for the fractured and solutioned dolomite/limestone bedrock was also applied.

The calculated flow velocities along the northwest, west, and south/southwest flow paths are 0.12 feet per day (ft/d), 0.18 ft/d, and 0.17 ft/d, respectively. These velocities were derived using the average hydraulic gradients presented above. Due to the hydrogeologic conditions affected by karst processes at the Site, the use of groundwater flow velocity calculations such as these may not be applicable; therefore, the above estimates should be considered a rough approximation.

3.3 Groundwater Sampling Procedures

Groundwater samples were collected from the compliance monitoring network and select piezometers using low-flow sampling procedures in accordance with 40 CFR §257.93(a). Wells were purged and sampled using an installed bladder pump with dedicated tubing; the piezometers were sampled using a submersible pump equipped with new disposable polyethylene tubing. All non-disposable equipment was decontaminated before use and between well locations.

A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters [i.e., pH, conductivity, oxidation-reduction potential (ORP), temperature, and dissolved oxygen (DO)] during purging to verify stabilization prior to sampling. Turbidity was measured using a LaMotte 2020we (or similar) portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

- pH ± 0.1 Standard Units (s.u.).
- Conductivity ± 5%.
- ±0.2 milligrams per liter (mg/L) or ±10%, whichever is greater for DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L, record only.
- Turbidity measured less than 10 nephelometric turbidity units (NTU).

Following purging, once stabilization was achieved, samples were collected into appropriately-preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC. (Pace) in Norcross, Georgia following chain-of-custody protocol. The field sampling forms generated during the 2018 monitoring events are provided in **Appendix A**.

3.4 Laboratory Analyses

Laboratory analyses were performed by Pace, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace maintains a NELAP certification for the Appendix III and Appendix IV parameters analyzed for this project. Metals were analyzed using USEPA Method 6020B; total dissolved solid was analyzed using Standard Method (SM) 2540C; anions were analyzed by USEPA Method 300.0; and total radium was analyzed by USEPA Methods 9315/9320.

The groundwater analytical results from the Appendix IV initial assessment monitoring event held March 2018 and the two semiannual assessment monitoring events in June and October 2018 are summarized in **Table 5**. The Pace laboratory reports associated with these results are provided in **Appendix A**. The pH field measurements recorded during the sampling events are also provided in **Table 5**.

3.5 Quality Assurance & Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events at the rate of one QA/QC sample per 10 groundwater samples and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in laboratory-provided bottles and submitted under the same chain of custody as the primary samples for analysis of the same parameters by Pace laboratories.

In addition to collecting QA/QC samples, the data were validated based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and applicable federal and site-specific guidance documents (SCS, 2017; USEPA, 2011; USEPA, 2017). Where necessary, the data were qualified with supporting documentation and justifications. The associated data validation report is provided in **Appendix A** with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section presents a summary of the statistical approach applied to assess the 2018 groundwater analytical data in downgradient compliance wells relative to the available historical dataset. Groundwater monitoring data collected during the semiannual monitoring events in June and October 2018, was statically analyzed pursuant to 40 CFR §257.95 following the PE-certified statistical method. Appendix III detection monitoring parameters were statistically analyzed to determine if constituents have returned to background levels. Appendix IV assessment monitoring parameters were analyzed to determine if concentrations statistically exceeded the established groundwater protection standards (GWPS). The following subsections provide an overview of the statistical methods used to evaluate Appendix III and IV parameters and statistical analyses results.

4.1 Statistical Methods

The Sanitas™ groundwater statistical software was used to perform the statistical analyses. Sanitas™ is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009).

4.1.1 Appendix III Statistical Methods

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for each of the Appendix III parameters. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent, and the most recent sample from each downgradient well is compared to the same limit for each parameter. If the most recent sample exceeds its respective background statistical limit, an initial SSI is identified. Following the Unified Guidance recommendation to update prediction limits every 2 to 3 years, the limits constructed from the first detection monitoring event (October 2017) remained fixed for the 2018 data analysis. Therefore, a direct comparison between the 2017 prediction limits and 2018 monitoring data was performed. The results are discussed in Section 4.2 and tabulated in **Table B-1**, **Appendix B**.

4.1.2 Appendix IV Statistical Methods

Appendix IV constituents detected during the initial assessment event (March 2018) are added to the list of parameters sampled during the subsequent semiannual sampling events (June and October 2018). To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV parameters in each downgradient well. Those confidence intervals are compared to both the state and federal GWPS. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its GWPS. If there is an exceedance of the established standard, a statistically significant level (SSL) exceedance is identified.

Background limits were used when determining the GWPS under USEPA rule 40 CFR §257.95(h) and Georgia EPD rule 391-3-4-.10(6)(a). Parametric tolerance limits were used to calculate background limits from pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples.

USEPA revised the federal CCR Rule on July 30, 2018, updating GWPS for cobalt, lead, lithium, and molybdenum. As described in 40 CFR §257.95(h)(1-3), the GWPS is:

(1) The maximum contaminant level (MCL) established under 40 CFR §141.62 and §141.66 of this title.

(2) Where an MCL has not been established:

(i) Cobalt 0.006 mg/l;

(ii) Lead 0.015 mg/l;

(iii) Lithium 0.040 mg/l; and

(iv) Molybdenum 0.10 mg/l.

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

USEPA's updated GWPS have not yet been incorporated under Georgia EPD's CCR Rule. Georgia EPD CCR Rule GWPS are:

(1) The federally established MCL.

(2) Where an MCL has not been established, the background concentration.

(3) Background levels for constituents where the background level is higher than the MCL.

Following the above federal and state rule requirements, GWPS have been established for statistical comparison of Appendix IV constituents and is presented in **Table 6**, *Summary of Background Levels and Groundwater Protection Standards*. Additional details are presented in the statistical analysis packages provided in **Appendix B**.

4.2 Statistical Analyses Results

Analytical data from the 2018 semiannual monitoring events in June and October were statistically analyzed in accordance with the Statistical Analysis Method Certification (October 2017). Appendix III statistical analysis was performed to determine if constituents have returned to background levels. Appendix IV assessment monitoring parameters were evaluated to determine if concentrations statistically exceeded the established GWPS.

Based on review of the Appendix III statistical analysis presented in **Table B-1**, Appendix III constituents have not returned to background levels and assessment monitoring should continue pursuant to 40 CFR §257.95(f).

4.2.1 First Semiannual Assessment Monitoring Event

Using GWPS established following 40 CFR §257.95(h), statistical analysis of Appendix IV data identified the following statistical exceedance of a GWPS at the identified well:

- Cobalt: BGWC-22

Using GWPS established under Georgia EPD CCR Rules for Solid Waste Management 391-3-4-.10(6)(a), statistical analysis of Appendix IV data identified the following statistical exceedances of GWPS at the listed wells:

- Cobalt: BGWC-22
- Molybdenum: BGWC-20, BGWC-22, BGWC-23, and BGWC-30

These statistical analyses were completed on October 15, 2018. A notification of these exceedances was placed in the operating record on November 14, 2018, pursuant to 40 CFR §257.95(g).

4.2.2 Second Semiannual Assessment Monitoring Event

Using GWPS established under 40 CFR §257.95(h), statistical analysis of Appendix IV data identified the following statistical exceedance of a GWPS at the listed well:

- Cobalt: BGWC-22

Using GWPS established according to Georgia EPD CCR Rules for Solid Waste Management 391-3-4-.10(6)(a), statistical analysis of Appendix IV data identified the following statistical exceedances of GWPS at the identified wells:

- Cobalt: BGWC-22
- Molybdenum: BGWC-20, BGWC-22, BGWC-23, and BGWC-30

In accordance with 40 CFR §257.95(g), a notification identifying SSLs for cobalt and molybdenum was prepared and placed in the facility's Operating Record on November 14, 2018. Pursuant to 40 CFR §257.96, an assessment of corrective measures was initiated for AP-1 on January 13, 2019.

5.0 MONITORING PROGRAM STATUS

In accordance with 40 CFR §257.94(e), an assessment monitoring program was established for Bowen AP-1. SSIs of Appendix III parameters and SSLs of Appendix IV parameters were identified at AP-1 during sampling events conducted in 2018. An assessment of corrective measures was initiated on January 13, 2019, within 90 days of SSL notification in accordance with 40 CFR §257.96.

6.0 CONCLUSIONS & FUTURE ACTIONS

This *2018 Annual Groundwater Monitoring and Corrective Action Report* for GPC's Plant Bowen AP-1 was prepared to fulfill the requirements of USEPA's CCR Rule. Statistical evaluations of the groundwater monitoring data for AP-1 identified SSIs of Appendix III groundwater monitoring parameters above background and SSLs of Appendix IV groundwater monitoring parameters above GWPS.

An assessment of corrective measures was initiated on January 15, 2019, within 90 days of SSL notification in accordance with 40 CFR §257.96. Pursuant to 40 CFR §257.95(b), an initial assessment monitoring event (for Appendix IV parameters) is scheduled to be completed in the first quarter of 2019, with the first semiannual assessment monitoring event tentatively planned for March 2019.

7.0 REFERENCES

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TABLES

Table 1
Monitoring Well Network Summary
Plant Bowen, Bartow County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing [1]	Easting [1]	Top of Casing Elevation (ft AMSL)	Top of Screen Elevation (ft AMSL)	Bottom of Screen Elevation (ft AMSL)	Well Depth (ft BTOC) [2]	Screen Interval Length
Compliance Monitoring Well									
BGWA-2	Upgradient	10/29/2015	1499375.65	2068599.23	729.81	650.90	640.90	89.17	10
BGWA-29	Upgradient	8/7/2016	1498283.38	2066363.43	721.39	632.70	622.70	99.03	10
BGWC-7	Downgradient	10/1/2015	1504713.10	2066801.85	705.60	625.50	615.50	90.40	10
BGWC-8	Downgradient	11/18/2015	1504672.07	2066928.29	706.65	637.20	627.20	79.73	10
BGWC-9	Downgradient	11/13/2015	1504910.51	2066144.11	692.11	638.70	628.70	63.74	10
BGWC-10	Downgradient	10/7/2015	1505032.56	2066080.17	686.26	634.20	624.20	62.37	10
BGWC-12	Downgradient	10/21/2015	1505280.77	2065909.74	694.60	626.60	616.60	78.28	10
BGWC-14	Downgradient	11/10/2015	1505406.14	2065043.82	718.77	640.20	630.20	88.84	10
BGWC-16	Downgradient	11/12/2015	1504656.54	2064248.97	674.34	635.80	625.80	48.87	10
BGWC-17	Downgradient	10/22/2015	1504432.14	2064260.75	673.71	615.60	605.60	68.39	10
BGWC-18	Downgradient	10/13/2015	1504118.94	2064258.25	672.89	645.20	635.20	37.95	10
BGWC-19	Downgradient	10/12/2015	1503742.31	2064245.92	673.65	629.40	619.40	54.58	10
BGWC-20	Downgradient	10/9/2015	1503367.84	2064260.88	675.17	635.70	625.70	49.73	10
BGWC-21	Downgradient	3/2/2016	1501627.60	2064348.78	691.41	648.70	638.70	52.99	10
BGWC-22	Downgradient	10/8/2015	1501324.02	2064359.44	695.49	662.70	652.70	43.05	10
BGWC-23	Downgradient	10/15/2015	1501000.87	2064351.45	695.57	654.90	644.90	50.95	10
BGWC-24	Downgradient	10/27/2015	1500620.18	2065032.39	702.30	646.50	636.50	66.11	10
BGWC-25	Downgradient	3/3/2016	1502292.88	2064244.72	680.51	632.90	622.90	57.87	10
BGWC-30	Downgradient	1/4/2017	1499816.75	2066394.31	701.18	651.50	641.50	59.98	10
Water Level Monitoring Piezometer									
BGWA-1	Downgradient	11/17/2015	1499099.83	2067205.55	720.95	672.30	662.30	58.97	10
BGWA-3	Downgradient	11/5/2015	1499419.93	2065186.44	724.33	645.70	635.70	88.97	10
BGWA-4	Downgradient	3/4/2016	1499484.76	2064697.83	728.70	660.40	650.40	78.61	10
BGWA-5	Downgradient	11/3/2015	1499435.96	2065421.03	720.94	662.10	652.10	69.10	10
BGWC-11	Downgradient	10/16/2015	1504998.34	2066092.86	686.69	619.80	609.80	77.18	10
BGWC-13	Downgradient	10/21/2015	1505436.84	2065250.98	717.54	654.40	644.40	73.45	10
BGWC-15	Downgradient	10/20/2015	1505279.56	2064731.57	717.98	655.10	645.10	73.21	10
BGWA-26	Downgradient	8/5/2016	1498696.48	2064190.20	728.66	663.40	653.40	75.56	10
BGWA-27	Downgradient	8/6/2016	1498718.03	2064387.85	735.29	651.90	641.90	93.74	10
BGWA-28	Downgradient	8/7/2016	1498748.11	2064577.77	737.49	661.20	651.20	86.58	10
PZ-1	Downgradient	6/23/2016	1505600.31	2066843.00	677.83	630.60	620.60	57.54	10
PZ-2	Downgradient	6/24/2016	1503857.59	2062937.95	668.32	649.30	639.30	29.33	10
PZ-3	Downgradient	6/22/2016	1505722.73	2066070.72	707.90	658.60	648.60	59.62	10
PZ-4	Downgradient	6/23/2016	1505788.40	2064315.36	718.71	669.20	659.20	59.78	10

Table 1
Monitoring Well Network Summary
Plant Bowen, Bartow County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing [1]	Easting [1]	Top of Casing Elevation (ft AMSL)	Top of Screen Elevation (ft AMSL)	Bottom of Screen Elevation (ft AMSL)	Well Depth (ft BTOC) [2]	Screen Interval Length
Additional Characterization Piezometer									
BGWA-6	Downgradient	11/6/2015	1499260.85	2065797.45	716.98	664.50	654.50	62.74	10
BGWA-33	Downgradient	7/10/2018	1497973.36	2064876.50	743.35	600.90	590.90	80.84	10
BGWC-31	Downgradient	7/17/2018	1503498.68	2064022.78	671.00	631.60	621.60	49.70	10
BGWC-32	Downgradient	7/18/2018	1501251.18	2064184.43	699.53	630.70	620.70	51.22	10
BGWC-34D	Downgradient	7/13/2018	1503356.62	2064259.26	675.53	602.13	592.13	79.75	10
BGWC-35D	Downgradient	7/12/2018	1501312.30	2064359.89	695.94	600.60	590.60	80.94	10
BGWC-36D	Downgradient	7/2/2018	1499808.60	2066415.39	701.17	585.60	575.60	96.35	10

Notes:
ft = feet
AMSL = above mean sea level
BTOC = below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.
(2) Total well depth accounts for sump if data provided on well construction logs.

Table 2
Groundwater Sampling Event Summary for 2018
Plant Bowen, Bartow County, Georgia

Well ID	Hydraulic Location	Mar 26-29, 2018	Jun 12-15, 2018	Oct 16-22, 2018	Status of Monitoring Well
Purpose of Sampling Event:		**App. IV Scan**	**Assessment**	**Assessment**	
Compliance Monitoring Well Network					
BGWA-2	Upgradient	S01	A01	A02	Assessment
BGWA-29	Upgradient	S01	A01	A02	Assessment
BGWC-7	Downgradient	S01	A01	A02	Assessment
BGWC-8	Downgradient	S01	A01	A02	Assessment
BGWC-9	Downgradient	S01	A01	A02	Assessment
BGWC-10	Downgradient	S01	A01	A02	Assessment
BGWC-12	Downgradient	S01	A01	A02	Assessment
BGWC-14	Downgradient	S01	A01	A02	Assessment
BGWC-16	Downgradient	S01	A01	A02	Assessment
BGWC-17	Downgradient	S01	A01	A02	Assessment
BGWC-18	Downgradient	S01	A01	A02	Assessment
BGWC-19	Downgradient	S01	A01	A02	Assessment
BGWC-20	Downgradient	S01	A01	A02	Assessment
BGWC-21	Downgradient	S01	A01	A02	Assessment
BGWC-22	Downgradient	S01	A01	A02	Assessment
BGWC-23	Downgradient	S01	A01	A02	Assessment
BGWC-24	Downgradient	S01	A01	A02	Assessment
BGWC-25	Downgradient	S01	A01	A02	Assessment
BGWC-30	Downgradient	S01	A01	A02	Assessment

Notes:
S## = Full Appendix IV parameters scan event number
A## = Assessment monitoring event number

Table 3
Summary of Groundwater Elevations
Plant Bowen, Bartow County, Georgia

Well ID	Top of Casing Elevation (ft AMSL)	Apr 8, 2018		Jun 11, 2018		Oct 15, 2018	
		Depth to Water (ft BTOC)	Groundwater Elevations (ft AMSL)	Depth to Water (ft BTOC)	Groundwater Elevations (ft AMSL)	Depth to Water (ft BTOC)	Groundwater Elevations (ft AMSL)
Compliance Monitoring Well Network							
BGWA-2	729.81	49.10	680.71	54.74	675.07	61.35	668.46
BGWA-29	721.39	42.10	679.29	47.01	674.38	53.82	667.57
BGWC-7	705.60	45.35	660.25	46.11	659.49	49.39	656.21
BGWC-8	706.65	46.83	659.82	47.20	659.45	50.67	655.98
BGWC-9	692.11	30.48	661.63	31.80	660.31	35.09	657.02
BGWC-10	686.26	28.46	657.80	29.91	656.35	32.65	653.61
BGWC-12	694.60	39.28	655.32	40.31	654.29	43.04	651.56
BGWC-14	718.77	82.86	635.91	77.36	641.41	78.20	640.57
BGWC-16	674.34	16.57	657.77	17.21	657.13	16.47	657.87
BGWC-17	673.71	15.31	658.40	16.50	657.21	14.97	658.74
BGWC-18	672.89	14.00	658.89	14.86	658.03	13.55	659.34
BGWC-19	673.65	15.60	658.05	16.24	657.41	15.17	658.48
BGWC-20	675.17	15.13	660.04	15.71	659.46	14.92	660.25
BGWC-21	691.41	18.03	673.38	20.70	670.71	18.75	672.66
BGWC-22	695.49	24.95	670.54	26.32	669.17	25.47	670.02
BGWC-23	695.57	29.35	666.22	30.85	664.72	30.05	665.52
BGWC-24	702.30	12.99	689.31	14.30	688.00	13.52	688.78
BGWC-25	680.51	15.82	664.69	17.77	662.74	16.80	663.71
BGWC-30	701.18	22.10	679.08	26.72	674.46	33.04	668.14
Water Level Monitoring Piezometer							
BGWA-1	720.95	41.89	679.06	46.49	674.46	52.85	668.10
BGWA-3	724.33	47.40	676.93	51.55	672.78	57.94	666.39
BGWA-4	728.70	51.91	676.79	56.03	672.67	62.28	666.42
BGWA-5	720.94	43.84	677.10	48.10	672.84	54.51	666.43
BGWC-11	686.69	24.98	661.71	26.50	660.19	29.53	657.16
BGWC-13	717.54	72.57	644.97	72.52	645.02	72.50	645.04
BGWC-15	717.98	66.60	651.38	66.61	651.37	68.15	649.83
BGWA-26	728.66	55.26	673.40	59.33	669.33	64.92	663.74
BGWA-27	735.29	61.98	673.31	65.83	669.46	71.50	663.79
BGWA-28	737.49	63.85	673.64	67.74	669.75	73.57	663.92
PZ-1	677.83	32.56	645.27	33.38	644.45	32.50	645.33
PZ-2	668.32	13.45	654.87	13.97	654.35	13.56	654.76
PZ-3	707.90	59.80	648.10	60.09	647.81	60.12	647.78
PZ-4	718.71	58.99	659.72	59.32	659.39	59.22	659.49
Additional Characterization Piezometer							
BGWA-6	716.98	37.41	679.57	42.16	674.82	49.35	667.63
BGWA-33	743.35	--	--	--	--	78.84	664.51
BGWC-31	671.00	--	--	--	--	14.56	656.44
BGWC-32	699.53	--	--	--	--	34.31	665.22
BGWC-34D	675.53	--	--	--	--	14.98	660.55
BGWC-35D	695.94	--	--	--	--	26.92	669.02
BGWC-36D	701.17	--	--	--	--	33.02	668.15

Notes:
-- = Well not installed at the time of the event.
ft AMSL = above mean sea level
ft BTOC = feet below top of casing

Table 4
Groundwater Flow Velocity Calculations - 2018
Plant Bowen, Bartow County, Georgia

	Apr 8, 2018				Jun 11, 2018				Oct 15, 2018				
Flow Path Direction [(1)]	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**Average Δh/Δl (ft/ft)**
Northwest	700	657.77	2,855	0.015	700	657.13	2,900	0.015	700	657.87	2,900	0.015	0.015
West	700	664.69	1,530	0.023	700	662.74	1,630	0.023	700	663.71	1,650	0.022	0.023
South/Southwest	698.4	679.57	1,054	0.018	695.5	672.78	1,175	0.019	696.6	667.63	1,105	0.026	0.021

			Averaged for 2018		
Flow Path Direction [(1)]	**K (ft/d)**	**n**	**Δh/Δl (ft/ft)**	**V (ft/d)**	**V (ft/yr)**
Northwest	2.44	0.3	0.015	0.12	44
West	2.44	0.3	0.023	0.18	67
South/Southwest	2.44	0.3	0.021	0.17	63

Notes:
ft = feet
ft/d = feet per day
ft/ft = feet per foot
ft/yr = feet per year
h_1, h_2 = point of interpreted groundwater elevation
Δh/Δl = hydraulic gradient
K = hydraulic conductivity
Δl = distance between location 1 and 2
n = effective porosity
V = groundwater flow velocity
(1) Flow path direction relative to the orientation of AP-1 and illustrated on Figures 3, 4, and 5 of associated report.

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWA-2	BGWA-2	BGWA-2	BGWA-29	BGWA-29	BGWA-29	BGWC-7	BGWC-7	BGWC-7
Sample Date		3/26/2018	6/12/2018	10/16/2018	3/26/2018	6/12/2018	10/16/2018	3/27/2018	6/13/2018	10/18/2018
Parameter [1,2]										
APPENDIX III	Boron	--	ND (0.0058 J)	ND (0.0066 J)	--	ND (0.0056 J)	ND (0.0071 J)	--	1.8	1.9
	Calcium	--	32.4	34.6	--	ND (20.3 J)	ND (19.4 J)	--	151	154
	Chloride	--	3.4	3.3	--	1.8	1.5	--	10.8	11.7
	Fluoride	ND	ND (0.086 J)	ND (0.06 J)	ND	ND (0.053 J)	ND	ND	ND (0.25 J)	ND (0.047 J)
	pH [3]	7.74	7.88	7.73	7.98	8.09	7.64	7.13	6.95	6.84
	Sulfate	--	8.3	8.9	--	6.8	7.6	--	419	438
	TDS	--	187	192	--	139	138	--	873	876
APPENDIX IV	Antimony	ND	--	--	ND	--	--	ND	--	--
	Arsenic	ND	ND (0.0013 J)	ND (0.00075 J)	ND	ND (0.00059 J)	ND	ND (0.0028 J)	ND (0.0023 J)	ND (0.0015 J)
	Barium	0.17	0.18	0.17	0.016	0.018	0.016	0.039	0.038	0.037
	Beryllium	ND	--	--	ND	--	--	ND	--	--
	Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND	--	--	ND	--	--	ND	--	--
	Cobalt	ND	ND	ND	ND	ND	ND	ND	ND (0.00068 J)	ND
	Lead	ND	--	--	ND	--	--	ND	--	--
	Lithium	ND	ND	ND	ND	ND	ND	ND (0.0087 J)	ND (0.0084 J)	ND (0.0083 J)
	Mercury	ND	--	--	ND	--	--	ND	--	--
	Molybdenum	ND	ND	ND	ND	ND	ND	0.01	0.013	ND (0.01 J)
	Comb. Radium 226/228	0.529	0.945 U	0.57 U	0.513	0.516 U	0.146 U	2.15	1.95 J	1.1 J
	Selenium	ND	--	--	ND	--	--	ND	--	--
	Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
-- = Parameter was not analyzed
J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL)
ND = Indicates the parameter was not detected above the analytical MDL
TDS = total dissolved solids

(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6020B, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320.
(3) The pH value presented was recorded at the time of sample collection in the field.

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWC-8	BGWC-8	BGWC-8	BGWC-9	BGWC-9	BGWC-9	BGWC-10	BGWC-10	BGWC-10
Sample Date		3/26/2018	6/12/2018	10/16/2018	3/27/2018	6/12/2018	10/17/2018	3/27/2018	6/14/2018	10/18/2018
Parameter [1,2]										
APPENDIX III	Boron	--	0.074	0.16	--	0.56	0.61	--	0.54	0.49
	Calcium	--	38.1	44.8	--	53.4	63	--	58.4	57.8
	Chloride	--	2.3	2.6	--	21.3	29.4	--	23.1	26.9
	Fluoride	ND	ND (0.061 J)	ND	0.36	ND (0.13 J)	ND (0.13 J)	ND	ND (0.046 J)	ND
	pH [3]	7.71	7.71	7.74	7.38	7.51	7.34	7.51	7.48	7.2
	Sulfate	--	35.2	53	--	80.6	117	--	110	122
	TDS	--	217	247	--	348	377	--	362	355
APPENDIX IV	Antimony	ND	--	--	ND	--	--	ND	--	--
	Arsenic	ND	ND (0.00065 J)	ND (0.00064 J)	ND (0.0021 J)	ND (0.0015 J)	ND (0.0035 J)	0.0064	0.0075	0.0056
	Barium	0.029	0.031	0.034	0.026	0.024	0.037	0.051	0.053	0.053
	Beryllium	ND	--	--	ND	--	--	ND	--	--
	Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND	--	--	ND	--	--	ND	--	--
	Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	ND	--	--	ND	--	--	ND	--	--
	Lithium	ND	ND	ND (0.001 J)	ND (0.0014 J)	ND (0.0012 J)	ND	ND (0.0025 J)	ND (0.0011 J)	ND (0.0016 J)
	Mercury	ND	--	--	ND	--	--	ND	--	--
	Molybdenum	ND	ND (0.0026 J)	ND (0.0041 J)	ND (0.0031 J)	ND (0.0043 J)	ND (0.0038 J)	ND (0.0032 J)	ND (0.0033 J)	ND (0.0034 J)
	Comb. Radium 226/228	0.303	0.494 U	0.633 U	0.745	0.319 U	0.319 U	0.779	1.22 U	0.841 U
	Selenium	ND	--	--	ND	--	--	ND	--	--
	Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWC-12	BGWC-12	BGWC-12	BGWC-14	BGWC-14	BGWC-14	BGWC-16	BGWC-16	BGWC-16
Sample Date		3/28/2018	6/14/2018	10/17/2018	3/29/2018	6/15/2018	10/19/2018	3/27/2018	6/12/2018	10/18/2018
Parameter [1,2]										
APPENDIX III	Boron	--	1	1	--	0.95	0.86	--	1.3	1.3
	Calcium	--	109	110	--	113	111	--	104	112
	Chloride	--	30.5	30.7	--	33.6	ND (35.1 J)	--	27.2	25.2
	Fluoride	ND	ND	ND	ND	0.41	ND	ND	ND (0.061 J)	ND
	pH [3]	7.22	7.35	7.4	7.35	7.32	6.9	6.81	7.01	6.7
	Sulfate	--	ND (275 J)	336	--	ND (248 J)	286	--	246	276
	TDS	--	684	739	--	633	642	--	593	578
APPENDIX IV	Antimony	ND	--	--	ND	--	--	ND	--	--
	Arsenic	ND (0.0015 J)	ND (0.00096 J)	ND	ND (0.0017 J)	ND (0.00074 J)	ND	ND (0.0014 J)	ND (0.00073 J)	ND
	Barium	0.034	0.032	0.033	0.067	0.066	0.065	0.027	0.029	0.026
	Beryllium	ND	--	--	ND	--	--	ND	--	--
	Cadmium	ND	ND	ND	ND	ND	ND	0.0013	0.0011	0.0012
	Chromium	ND	--	--	ND	--	--	ND	--	--
	Cobalt	ND	ND	ND	ND	ND	ND	ND	ND (0.0048 J)	ND (0.0047 J)
	Lead	ND	--	--	ND	--	--	ND	--	--
	Lithium	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	ND	--	--	ND	--	--	ND	--	--
	Molybdenum	ND	ND	ND	0.012	0.012	ND (0.0094 J)	ND	ND	ND
	Comb. Radium 226/228	0.36	0.316 U	0.326 U	6.35	6.2 J	3.76 J	1.34	0.732 U	0.522 U
	Selenium	ND	--	--	ND	--	--	ND	--	--
	Thallium	ND	ND	ND	ND	ND	ND (0.00017 J)	ND (0.00019 J)	ND (0.0002 J)	ND (0.0002 J)

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWC-17	BGWC-17	BGWC-17	BGWC-18	BGWC-18	BGWC-18	BGWC-19	BGWC-19	BGWC-19
Sample Date		3/27/2018	6/14/2018	10/17/2018	3/27/2018	6/14/2018	10/18/2018	3/27/2018	6/15/2018	10/19/2018
Parameter [1,2]										
APPENDIX III	Boron	--	1.4	1.4	--	0.75	0.8	--	0.44	0.65
	Calcium	--	65.7	69.7	--	53.1	60.4	--	49.7	63.1
	Chloride	--	33.3	41.8	--	7.3	10.9	--	9.3	ND (15.3 J)
	Fluoride	0.33	ND (0.11 J)	ND	ND	ND (0.095 J)	ND (0.054 J)	ND	ND (0.07 J)	ND (0.17 J)
	pH [3]	7.28	7.22	7.37	6.41	6.61	6.67	6.52	6.5	6.38
	Sulfate	--	106	118	--	74.6	89.3	--	ND (78.3 J)	114
	TDS	--	395	446	--	290	325	--	280	321
APPENDIX IV	Antimony	ND	--	--	ND	--	--	ND	--	--
	Arsenic	ND (0.00076 J)	ND	ND	ND (0.00066 J)	ND	ND	ND (0.00082 J)	ND (0.00074 J)	ND
	Barium	0.015	0.016	0.015	0.027	0.032	0.033	0.029	0.032	0.037
	Beryllium	ND	--	--	ND	--	--	ND	--	--
	Cadmium	ND	ND (0.00015 J)	ND	ND	ND	ND (0.00032 J)	ND	ND	ND
	Chromium	ND	--	--	ND	--	--	ND	--	--
	Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	ND	--	--	ND	--	--	ND	--	--
	Lithium	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	ND	--	--	ND	--	--	ND	--	--
	Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Comb. Radium 226/228	0.551	0.638 U	0.555 U	0.569	0.989 U	0.875 U	0.169	0.625 U	0.784 U
	Selenium	ND	--	--	ND	--	--	ND	--	--
	Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWC-20	BGWC-20	BGWC-20	BGWC-21	BGWC-21	BGWC-21	BGWC-22	BGWC-22	BGWC-22
Sample Date		3/28/2018	6/13/2018	10/22/2018	3/28/2018	6/14/2018	10/19/2018	3/29/2018	6/14/2018	10/22/2018
Parameter [1,2]										
APPENDIX III	Boron	--	3.6	3.6	--	ND (0.035 J)	ND (0.028 J)	--	11	16.1
	Calcium	--	234	241	--	39.4	40.6	--	482	575
	Chloride	--	150	149	--	3.3	ND (4.1 J)	--	725	827
	Fluoride	ND	ND (0.038 J)	ND	ND	ND	ND	0.58	ND (0.15 J)	0.78
	pH [3]	7.19	7.24	6.93	7.69	7.7	7.57	6.96	6.92	6.81
	Sulfate	--	ND (541 J)	604	--	48.1	57.2	--	738	846
	TDS	--	1060	1150	--	231	236	--	2380	2490
APPENDIX IV	Antimony	ND	--	--	ND	--	--	ND	--	--
	Arsenic	ND (0.0018 J)	ND (0.0015 J)	ND	ND (0.0012 J)	ND (0.00087 J)	ND (0.00059 J)	ND (0.0037 J)	ND (0.0027 J)	ND (0.0016 J)
	Barium	0.03	0.031	0.03	0.043	0.042	0.038	0.088	0.093	0.088
	Beryllium	ND	--	--	ND	--	--	ND	--	--
	Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND	--	--	ND	--	--	ND	--	--
	Cobalt	ND	ND	ND	ND	ND	ND	0.016	0.017	0.021
	Lead	ND	--	--	ND	--	--	ND	--	--
	Lithium	ND (0.013 J)	ND (0.02 J)	ND (0.016 J)	ND	ND	ND	ND (0.021 J)	ND (0.024 J)	ND (0.034 J)
	Mercury	ND	--	--	ND	--	--	ND	--	--
	Molybdenum	0.012	0.016	0.013	ND	ND	ND	0.056	0.059	0.055
	Comb. Radium 226/228	0.97	0.686 U	0.559 U	0.864	0.583 U	0.982 U	2.43	2.14 J	1.43 J
	Selenium	ND	--	--	ND	--	--	ND	--	--
	Thallium	ND	ND	ND	ND	ND	ND	ND (0.00063 J)	ND (0.00069 J)	ND (0.00071 J)

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWC-23	BGWC-23	BGWC-23	BGWC-24	BGWC-24	BGWC-24	BGWC-25	BGWC-25	BGWC-25
Sample Date		3/29/2018	6/13/2018	10/22/2018	3/29/2018	6/13/2018	10/22/2018	3/28/2018	6/14/2018	10/22/2018
Parameter [1,2]										
APPENDIX III	Boron	--	8.3	9	--	30.1	44.7	--	ND (0.017 J)	ND (0.03 J)
	Calcium	--	385	424	--	970	1150	--	44.8	52.2
	Chloride	--	ND (598 J)	639	--	ND (1880 J)	2050	--	3.4	3.9
	Fluoride	ND	0.71	0.81	2	3.1	3.1	ND	ND	ND
	pH [3]	7.06	7.19	7.11	6.7	6.58	6.61	7.39	7.35	7.25
	Sulfate	--	ND (586 J)	590	--	ND (689 J)	723	--	10	8.1
	TDS	--	2020	1880	--	4180	4300	--	225	218
APPENDIX IV	Antimony	ND	--	--	ND	--	--	ND	--	--
	Arsenic	ND (0.0028 J)	ND (0.0019 J)	ND (0.0015 J)	ND (0.0075 J)	ND (0.0045 J)	ND (0.0027 J)	ND (0.0019 J)	ND (0.0022 J)	ND (0.0026 J)
	Barium	0.085	0.091	0.087	0.08	0.1	0.1	0.018	0.019	0.018
	Beryllium	ND	--	--	ND	--	--	ND	--	--
	Cadmium	ND	ND	ND	0.0063	0.0053	0.0053	ND	ND	ND
	Chromium	ND	--	--	ND	--	--	ND	--	--
	Cobalt	ND	ND	ND	ND	ND (0.0039 J)	ND (0.0043 J)	ND	ND	ND
	Lead	ND	--	--	ND	--	--	ND	--	--
	Lithium	ND (0.014 J)	ND (0.014 J)	ND (0.016 J)	ND (0.0053 J)	ND (0.0067 J)	ND (0.0075 J)	ND	ND	ND
	Mercury	ND	--	--	ND	--	--	ND	--	--
	Molybdenum	0.013	0.013	0.013	ND (0.0027 J)	ND	ND	ND	ND	ND
	Comb. Radium 226/228	1.65	0.983 U	1.21 J	2.79	2.19 J	2.18 J	0.507	0.721 U	0.741 U
	Selenium	ND	--	--	ND	--	--	ND	--	--
	Thallium	ND	ND	ND	ND (0.00048 J)	ND (0.00053 J)	ND (0.00047 J)	ND	ND	ND

Table 5
Summary of Groundwater Analytical Data
Plant Bowen, Bartow County, Georgia

Well ID		BGWC-30	BGWC-30	BGWC-30
Sample Date		3/26/2018	6/15/2018	10/22/2018
Parameter [1,2]				
APPENDIX III	Boron	--	8.5	9.5
	Calcium	--	198	230
	Chloride	--	ND (390 J)	400
	Fluoride	0.75	0.51	0.44
	pH [3]	7.33	7.35	7.35
	Sulfate	--	ND (174 J)	204
	TDS	--	1190	1070
APPENDIX IV	Antimony	ND	--	--
	Arsenic	ND	ND (0.00089 J)	ND (0.00064 J)
	Barium	0.1	0.087	0.1
	Beryllium	ND	--	--
	Cadmium	ND	ND (0.0002 J)	ND
	Chromium	ND	--	--
	Cobalt	ND	ND	ND
	Lead	ND	--	--
	Lithium	ND (0.0063 J)	ND (0.0049 J)	ND (0.005 J)
	Mercury	ND	--	--
	Molybdenum	0.014	0.012	0.01
	Comb. Radium 226/228	1.61 U	0.815 U	1.02 U
	Selenium	ND	--	--
	Thallium	ND (0.00058 J)	ND (0.00056 J)	ND (0.00034 J)

Table 6

Summary of Background Levels and Groundwater Protection Standards
Plant Bowen, Bartow County, Georgia

Analyte	Units	Background[1]	Federal GWPS[2]	State GWPS[3]
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.218	2	2
Beryllium	mg/L	0.003	0.004	0.004
Cadmium	mg/L	0.001	0.005	0.005
Chromium	mg/L	0.01	0.1	0.1
Cobalt	mg/L	Federal: 0.005[4] State: 0.01	0.006	0.01
Fluoride	mg/L	0.197; 0.191	4	4
Lead	mg/L	0.005	0.015[5]	0.005
Lithium	mg/L	Federal: 0.025[4] State: 0.05	0.04	0.05
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.01
Selenium	mg/L	0.01	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002
Combined Radium-226/228	pCi/L	1.86; 1.68	5	5

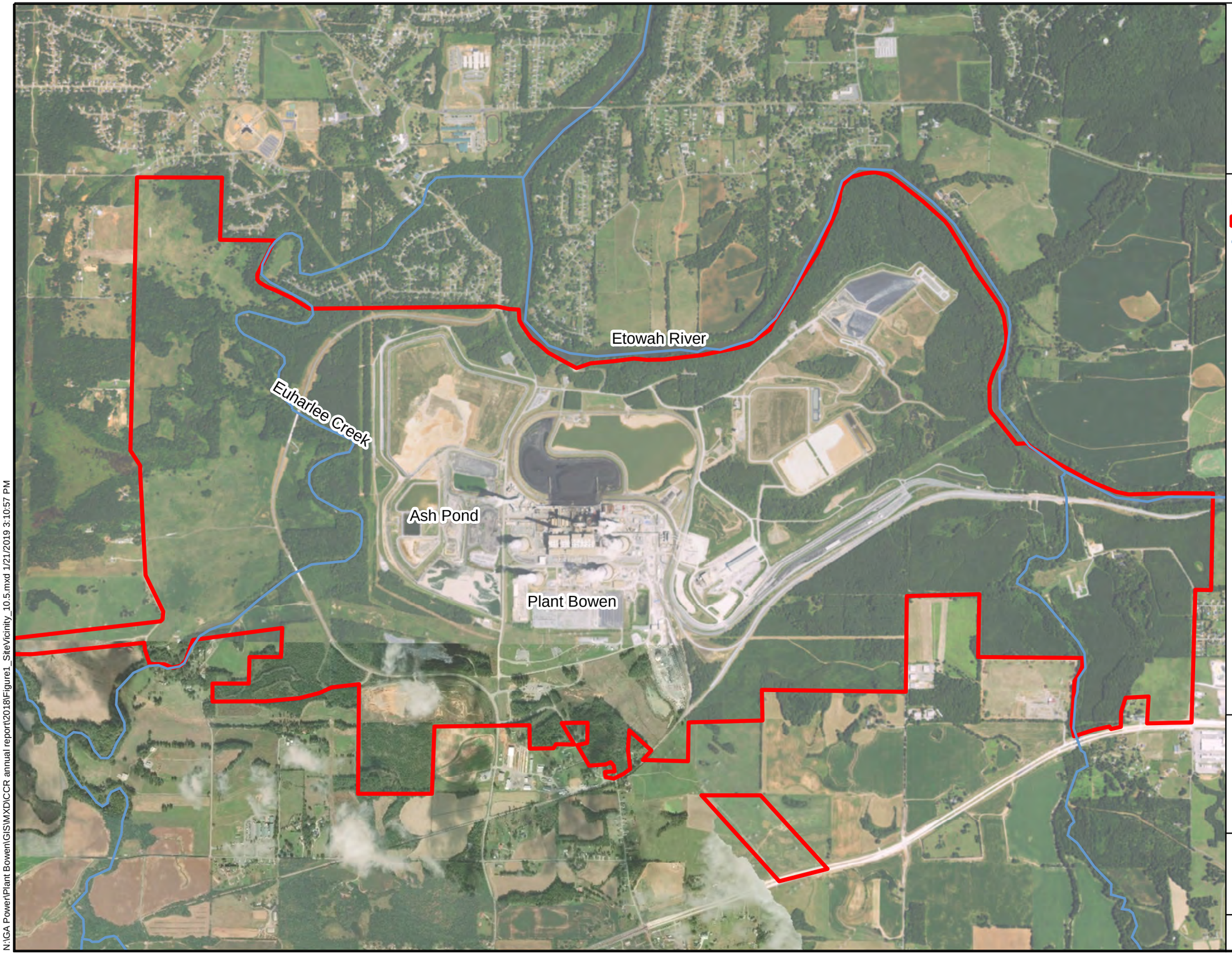
Notes:

"mg/L" = milligrams per liter

"pCi/L" = picocuries per liter

1. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (EPD) Rule 391-3-4-.10(6)(a). Where two numbers are present, they denote the different background levels for each of the two semiannual monitoring events in the order that they were determined.
2. Under 40 CFR §257.95(h)(1-3) the GWPS is: (i) the maximum contaminant level (MCL) established under §§141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS or regional screen level (RSL) is used; or (iii) background levels for constituents were the background level is higher than the MCL or rule-specified GWPS.
3. Under the existing EPD rules, the GWPS is: (i) the MCL, (ii) where the MCL is not established, the background concentration, or (iii) background levels for constituents were the background level is higher than the MCL.
4. The background TL used to evaluate GWPS for this analyte equals half the laboratory specified reporting limit (RL). Per the SAP, and in accordance with the Unified Guidance, a non-parametric tolerance limit approach was used since the data set contained greater than 50% non-detect (ND) results for this analyte. Under this approach, the TL equals the highest value reported, for which is the laboratory RL. Since a RL may be influenced due to sample matrix interference at the time of analysis, half the RL was applied in this select case.
5. Currently, there is no Envrironmental Protection Agency (EPA) MCL established for lead. The value listed as GWPS is the established EPA Action Level for drinking water.

FIGURES



N

LEGEND

- Approximate Site Boundary
- River or Stream

0 900 1,800 3,600 Feet

SITE LOCATION MAP

GEORGIA POWER COMPANY
PLANT BOWEN AP-1
CARTERSVILLE, BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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FIGURE 1

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N

LEGEND

- Compliance Monitoring Well
- Water Level Monitoring Piezometer
- Additional Characterization Piezometer

NOTE:
1. All wells and piezometers presented are screeened within the weathered fractured bedrock.

0 400 800 1,600
Feet

BEDROCK AQUIFER MONITORING WELL AND PIEZOMETER NETWORK MAP

GEORGIA POWER COMPANY
PLANT BOWEN AP-1
CARTERSVILLE, BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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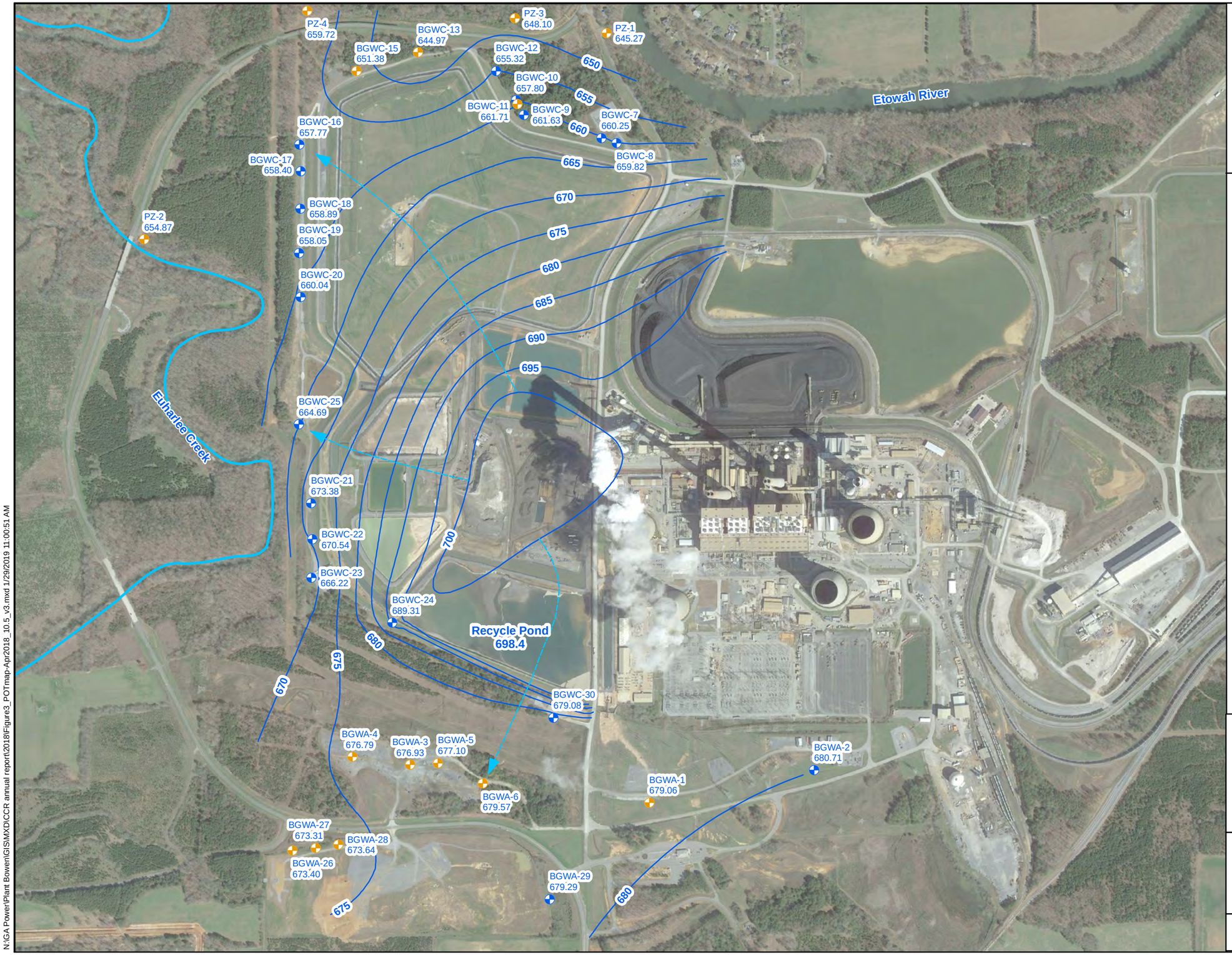
FIGURE 2

N:\GA Power\Plant Bowen\GIS\MXD\CCR annual report\2018\Figure2_WellMap_10.5.mxd 1/21/2019 3:14:05 PM



N:\GA Power\Plant Bowen\GIS\MXD\CCR annual report\2018\Figure3_POTmap-Apr2018_10.5_v3.mxd 1/29/2019 11:00:51 AM

N

LEGEND

- Compliance Monitoring Well (Groundwater elevation, ft AMSL)
- Water Level Monitoring Piezometer (Groundwater elevation, ft AMSL)
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction

NOTES:
1. Water level elevations recorded on April 8, 2018. Elevation provided in feet above mean sea level (ft AMSL) in North American Vertical Datum (NAVD) 88.
2. All wells and piezometers presented are screened within the weathered or fractured bedrock.

0 400 800 1,600
Feet

POTENTIOMETRIC SURFACE CONTOUR MAP - APRIL 2018

GEORGIA POWER COMPANY
PLANT BOWEN AP-1
CARTERSVILLE, BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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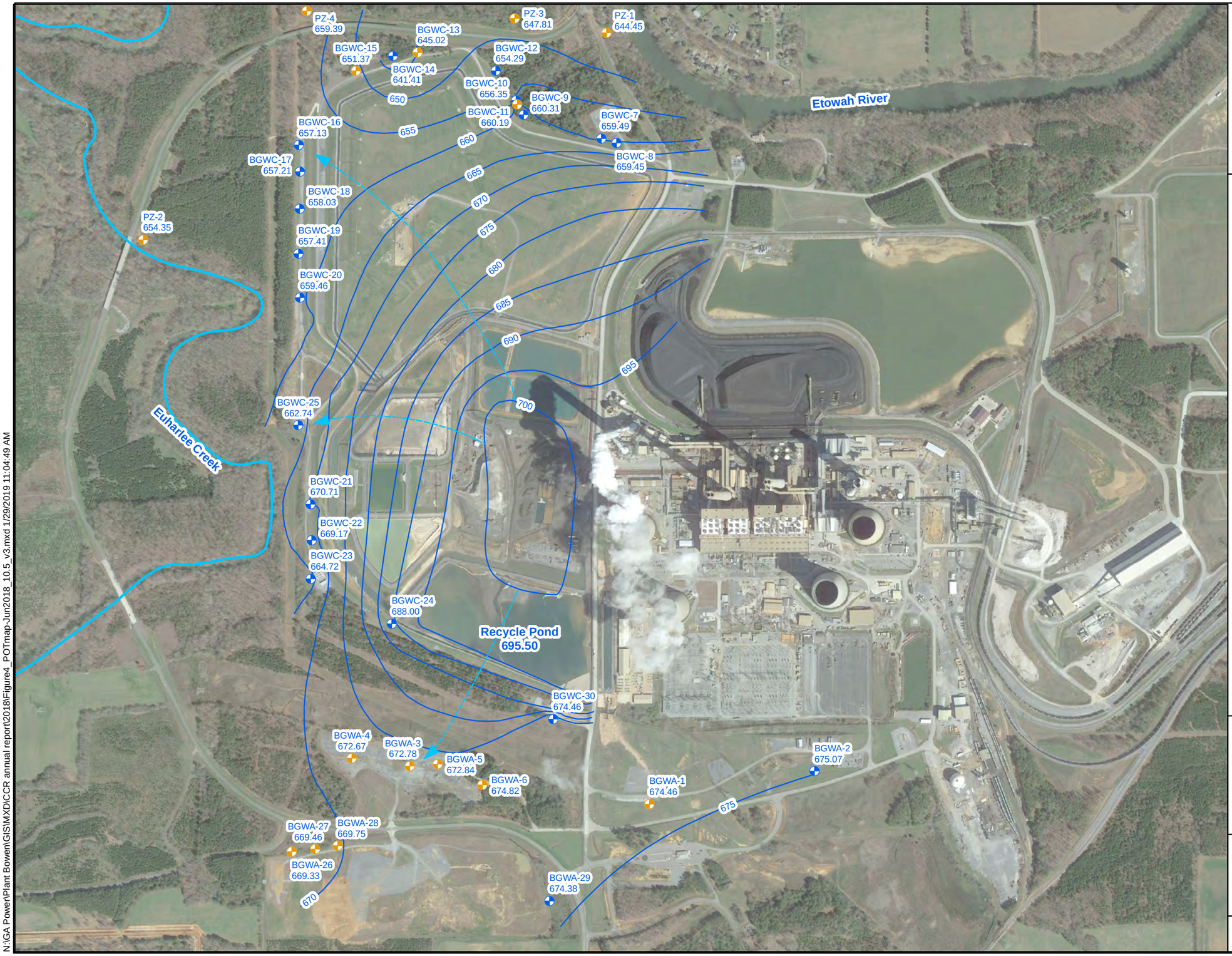
FIGURE 3



N:\GA Power\Plant Bowen\GIS\MXD\CCR annual report\2018\Figure4_POTmap-Jun2018_10.5_v3.mxd 1/29/2019 11:04:49 AM

N

LEGEND

- Compliance Monitoring Well (Groundwater elevation, ft AMSL)
- Water Level Monitoring Piezometer (Groundwater elevation, ft AMSL)
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction

NOTES:
1. Water level elevation recorded on June 11, 2018. Elevation provided in feet above mean sea level (ft AMSL) in North American Vertical Datum (NAVD) 88.
2. All wells and piezometers presented are screened within the weathered or fractured bedrock.

0 400 800 1,600
Feet

POTENTIOMETRIC SURFACE CONTOUR MAP - JUNE 2018

GEORGIA POWER COMPANY
PLANT BOWEN AP-1
CARTERSVILLE, BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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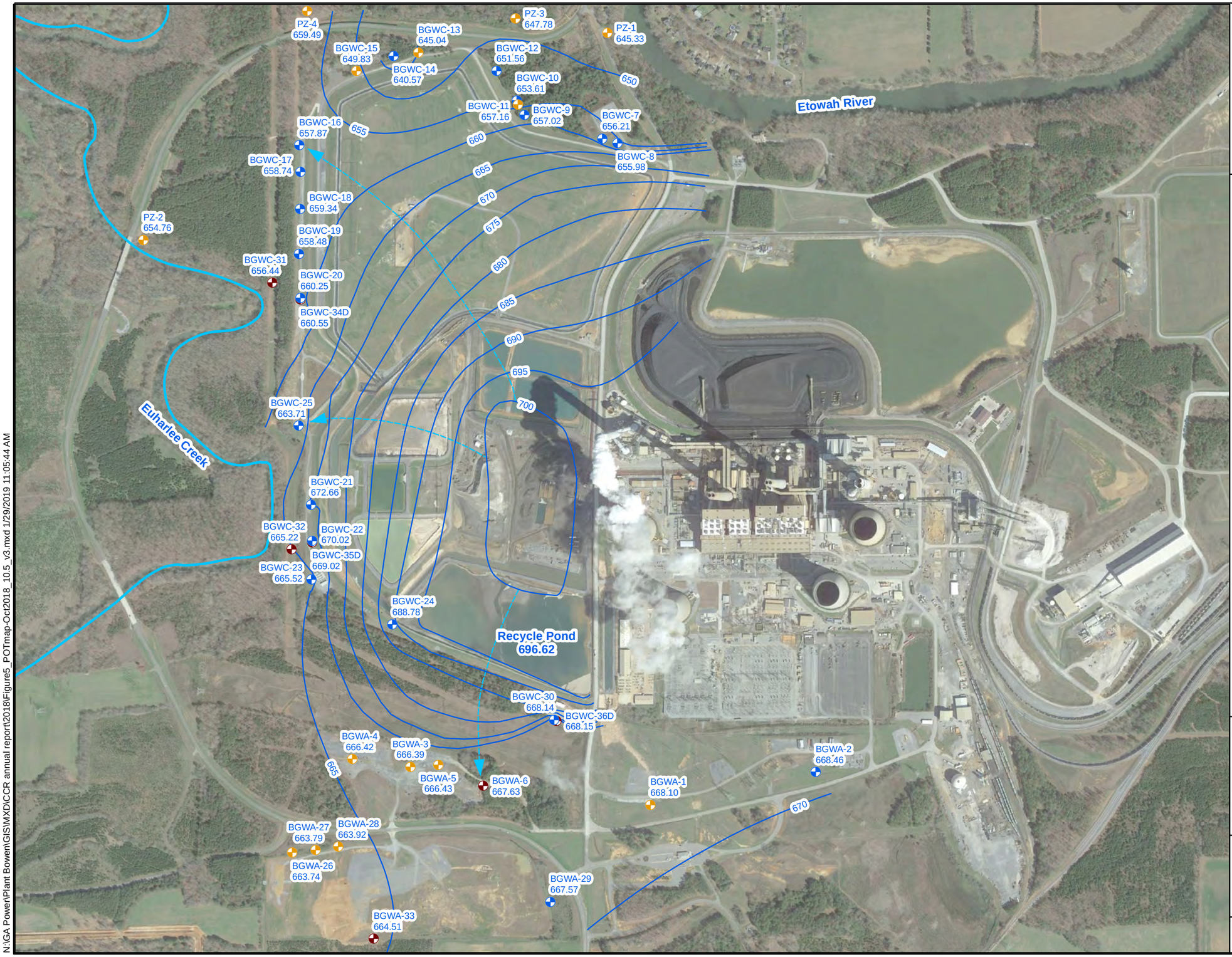
FIGURE 4



N:\GA Power\Plant Bowen\GIS\MXD\CCR annual report\2018\Figure5_POTmap-Oct2018_10.5_v3.mxd 1/29/2019 11:05:44 AM

N

LEGEND

- Compliance Monitoring Well (Groundwater elevation, ft AMSL)
- Water Level Monitoring Piezometer (Groundwater elevation, ft AMSL)
- Additional Characterization Piezometer (Groundwater elevation, ft AMSL)
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction

NOTES:
1. Water level elevations recorded on October 15, 2018, except for the elevations of the Recycle Pond, recorded September 21, 2018. Elevation provided in feet above mean sea level (ft AMSL) in North American Vertical Datum (NAVD) 88.
2. All wells and piezometers presented are screened within the weathered or fractured bedrock.

0 400 800 1,600
Feet

POTENTIOMETRIC SURFACE CONTOUR MAP - OCTOBER 2018

GEORGIA POWER COMPANY
PLANT BOWEN AP-1
CARTERSVILLE, BARTOW COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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FIGURE 5

APPENDIX A
Laboratory Analytical and Field Sampling Reports

Appendix A1: Laboratory Analytical Data Packages and Data Validation Reports

Appendix A2: Field Sampling Forms

APPENDIX A1
Laboratory Analytical Data Packages and Data Validation Reports

Laboratory Reports

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 13, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 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.

REV04132018_report revised to correct RLs for Metals data.

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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Lab ID	Sample ID	Matrix	Date Collected	Date Received
263269001	**BGWA-2**	Water	03/26/18 10:36	03/27/18 11:30
263269002	**BGWA-2**	Water	03/26/18 10:36	03/27/18 11:30
263269003	**BGWC-8**	Water	03/26/18 14:18	03/27/18 11:30
263269004	**BGWC-8**	Water	03/26/18 14:18	03/27/18 11:30
263269005	**BGWA-29**	Water	03/26/18 13:28	03/27/18 11:30
263269006	**BGWA-29**	Water	03/26/18 13:28	03/27/18 11:30
263269007	**BGWC-30**	Water	03/26/18 15:22	03/27/18 11:30
263269008	**BGWC-30**	Water	03/26/18 15:22	03/27/18 11:30
263269009	**FBL032618**	Water	03/26/18 16:32	03/27/18 11:30
263269010	**FBL032618**	Water	03/26/18 16:32	03/27/18 11:30
263269011	**EQBL032618**	Water	03/26/18 16:38	03/27/18 11:30
263269012	**EQBL032618**	Water	03/26/18 16:38	03/27/18 11:30

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
263269001	**BGWA-2**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263269002	**BGWA-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
263269003	**BGWC-8**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263269004	**BGWC-8**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
263269005	**BGWA-29**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263269006	**BGWA-29**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
263269007	**BGWC-30**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263269008	**BGWC-30**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
263269009	**FBL032618**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263269010	**FBL032618**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
263269011	**EQBL032618**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263269012	**EQBL032618**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWA-2 **Lab ID: 263269001** Collected: 03/26/18 10:36 Received: 03/27/18 11:30 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	03/28/18 13:00	03/29/18 22:32	7440-36-0	
Arsenic	**0.0019J**	mg/L	0.0050	0.00057	1	03/28/18 13:00	03/29/18 22:32	7440-38-2	B
Barium	**0.17**	mg/L	0.010	0.00078	1	03/28/18 13:00	03/29/18 22:32	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/28/18 13:00	03/29/18 22:32	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/28/18 13:00	03/29/18 22:32	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/28/18 13:00	03/29/18 22:32	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/28/18 13:00	03/29/18 22:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/28/18 13:00	03/29/18 22:32	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/28/18 13:00	03/29/18 22:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/28/18 13:00	03/29/18 22:32	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/28/18 13:00	03/29/18 22:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/28/18 13:00	03/29/18 22:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/29/18 11:30	03/29/18 16:49	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/28/18 17:32	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWC-8 **Lab ID: 263269003** Collected: 03/26/18 14:18 Received: 03/27/18 11:30 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	03/28/18 13:00	03/29/18 22:43	7440-36-0	
Arsenic	**0.00090J**	mg/L	0.0050	0.00057	1	03/28/18 13:00	03/29/18 22:43	7440-38-2	B
Barium	**0.029**	mg/L	0.010	0.00078	1	03/28/18 13:00	03/29/18 22:43	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/28/18 13:00	03/29/18 22:43	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/28/18 13:00	03/29/18 22:43	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/28/18 13:00	03/29/18 22:43	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/28/18 13:00	03/29/18 22:43	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/28/18 13:00	03/29/18 22:43	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/28/18 13:00	03/29/18 22:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/28/18 13:00	03/29/18 22:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/28/18 13:00	03/29/18 22:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/28/18 13:00	03/29/18 22:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/29/18 11:30	03/29/18 16:59	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/28/18 17:53	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWA-29 **Lab ID: 263269005** Collected: 03/26/18 13:28 Received: 03/27/18 11:30 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	03/28/18 13:00	03/29/18 23:06	7440-36-0	
Arsenic	**0.00066J**	mg/L	0.0050	0.00057	1	03/28/18 13:00	03/29/18 23:06	7440-38-2	B
Barium	**0.016**	mg/L	0.010	0.00078	1	03/28/18 13:00	03/29/18 23:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/28/18 13:00	03/29/18 23:06	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/28/18 13:00	03/29/18 23:06	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/28/18 13:00	03/29/18 23:06	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/28/18 13:00	03/29/18 23:06	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/28/18 13:00	03/29/18 23:06	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/28/18 13:00	03/29/18 23:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/28/18 13:00	03/29/18 23:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/28/18 13:00	03/29/18 23:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/28/18 13:00	03/29/18 23:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/29/18 11:30	03/29/18 17:01	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/28/18 18:14	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWC-30 **Lab ID: 263269007** Collected: 03/26/18 15:22 Received: 03/27/18 11:30 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	03/28/18 13:00	03/29/18 23:18	7440-36-0	
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	03/28/18 13:00	03/29/18 23:18	7440-38-2	B
Barium	**0.10**	mg/L	0.010	0.00078	1	03/28/18 13:00	03/29/18 23:18	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/28/18 13:00	03/29/18 23:18	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/28/18 13:00	03/29/18 23:18	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/28/18 13:00	03/29/18 23:18	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/28/18 13:00	03/29/18 23:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/28/18 13:00	03/29/18 23:18	7439-92-1	
Lithium	**0.0063J**	mg/L	0.050	0.00097	1	03/28/18 13:00	03/29/18 23:18	7439-93-2	
Molybdenum	**0.014**	mg/L	0.010	0.0019	1	03/28/18 13:00	03/29/18 23:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/28/18 13:00	03/29/18 23:18	7782-49-2	
Thallium	**0.00058J**	mg/L	0.0010	0.00014	1	03/28/18 13:00	03/29/18 23:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/29/18 11:30	03/29/18 17:04	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.75**	mg/L	0.30	0.029	1		03/28/18 18:34	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: FBL032618 **Lab ID: 263269009** Collected: 03/26/18 16:32 Received: 03/27/18 11:30 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	03/28/18 13:00	03/29/18 23:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/28/18 13:00	03/29/18 23:35	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/28/18 13:00	03/29/18 23:35	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/28/18 13:00	03/29/18 23:35	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/28/18 13:00	03/29/18 23:35	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/28/18 13:00	03/29/18 23:35	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/28/18 13:00	03/29/18 23:35	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/28/18 13:00	03/29/18 23:35	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/28/18 13:00	03/29/18 23:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/28/18 13:00	03/29/18 23:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/28/18 13:00	03/29/18 23:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/28/18 13:00	03/29/18 23:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/29/18 11:30	03/29/18 17:06	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/28/18 20:17	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: EQBL032618 **Lab ID: 263269011** Collected: 03/26/18 16:38 Received: 03/27/18 11:30 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	03/28/18 13:00	03/29/18 23:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/28/18 13:00	03/29/18 23:40	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/28/18 13:00	03/29/18 23:40	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/28/18 13:00	03/29/18 23:40	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/28/18 13:00	03/29/18 23:40	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/28/18 13:00	03/29/18 23:40	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/28/18 13:00	03/29/18 23:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/28/18 13:00	03/29/18 23:40	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/28/18 13:00	03/29/18 23:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/28/18 13:00	03/29/18 23:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/28/18 13:00	03/29/18 23:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/28/18 13:00	03/29/18 23:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/29/18 11:30	03/29/18 17:13	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/28/18 20:38	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

QC Batch: 3394 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 263269001, 263269003, 263269005, 263269007, 263269009, 263269011

METHOD BLANK: 17330 Matrix: Water
Associated Lab Samples: 263269001, 263269003, 263269005, 263269007, 263269009, 263269011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/29/18 16:45	

LABORATORY CONTROL SAMPLE: 17331

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0027	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 17332 17333

Parameter	Units	263269001 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	100	101	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

QC Batch: 3319 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 263269001, 263269003, 263269005, 263269007, 263269009, 263269011

METHOD BLANK: 16959 Matrix: Water
Associated Lab Samples: 263269001, 263269003, 263269005, 263269007, 263269009, 263269011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	03/29/18 20:55	
Arsenic	mg/L	0.00059J	0.0050	0.00057	03/29/18 20:55	
Barium	mg/L	ND	0.010	0.00078	03/29/18 20:55	
Beryllium	mg/L	ND	0.0030	0.000050	03/29/18 20:55	
Cadmium	mg/L	ND	0.0010	0.000093	03/29/18 20:55	
Chromium	mg/L	ND	0.010	0.0016	03/29/18 20:55	
Cobalt	mg/L	ND	0.010	0.00052	03/29/18 20:55	
Lead	mg/L	ND	0.0050	0.00027	03/29/18 20:55	
Lithium	mg/L	ND	0.050	0.00097	03/29/18 20:55	
Molybdenum	mg/L	ND	0.010	0.0019	03/29/18 20:55	
Selenium	mg/L	ND	0.010	0.0014	03/29/18 20:55	
Thallium	mg/L	ND	0.0010	0.00014	03/29/18 20:55	

LABORATORY CONTROL SAMPLE: 16960

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	102	80-120	
Barium	mg/L	.1	0.099	99	80-120	
Beryllium	mg/L	.1	0.10	100	80-120	
Cadmium	mg/L	.1	0.10	101	80-120	
Chromium	mg/L	.1	0.10	103	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.098	98	80-120	
Lithium	mg/L	.1	0.11	106	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 16961 16962

Parameter	Units	263234002 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	108	108	75-125	0	20	
Arsenic	mg/L	0.00071J	.1	.1	0.11	0.11	106	106	75-125	0	20	
Barium	mg/L	0.021	.1	.1	0.12	0.12	104	103	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20	
Cadmium	mg/L	ND	.1	.1	0.11	0.10	106	104	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 16961 16962

Parameter	Units	263234002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	ND	.1	.1	0.11	0.11	107	108	75-125	0	20	
Cobalt	mg/L	ND	.1	.1	0.10	0.10	105	104	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	102	101	75-125	1	20	
Lithium	mg/L	ND	.1	.1	0.11	0.10	105	105	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	106	105	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.10	0.11	103	106	75-125	3	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

QC Batch: 3334 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 263269001, 263269003, 263269005, 263269007, 263269009, 263269011

METHOD BLANK: 17039 Matrix: Water
Associated Lab Samples: 263269001, 263269003, 263269005, 263269007, 263269009, 263269011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	03/28/18 14:06	

LABORATORY CONTROL SAMPLE: 17040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 17041 17042

Parameter	Units	263234001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	10	9.9	97	96	90-110	1	15	

MATRIX SPIKE SAMPLE: 17043

Parameter	Units	263234002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	9.7	97	90-110	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWA-2 **Lab ID: 263269002** Collected: 03/26/18 10:36 Received: 03/27/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.529 ± 0.201 (0.182) C:83% T:NA**	pCi/L	04/09/18 07:47	13982-63-3	
Radium-228	EPA 9320	**-0.0298 ± 0.347 (0.811) C:67% T:86%**	pCi/L	04/10/18 10:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.529 ± 0.548 (0.993)**	pCi/L	04/12/18 11:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWC-8 **Lab ID: 263269004** Collected: 03/26/18 14:18 Received: 03/27/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.303 ± 0.153 (0.193) C:85% T:NA**	pCi/L	04/09/18 07:47	13982-63-3	
Radium-228	EPA 9320	**-0.259 ± 0.323 (0.810) C:73% T:79%**	pCi/L	04/10/18 10:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.303 ± 0.476 (1.00)**	pCi/L	04/12/18 11:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWA-29 **Lab ID: 263269006** Collected: 03/26/18 13:28 Received: 03/27/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.195 ± 0.128 (0.196) C:86% T:NA**	pCi/L	04/09/18 07:47	13982-63-3	
Radium-228	EPA 9320	**0.318 ± 0.392 (0.831) C:73% T:77%**	pCi/L	04/10/18 10:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.513 ± 0.520 (1.03)**	pCi/L	04/12/18 11:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: BGWC-30 **Lab ID: 263269008** Collected: 03/26/18 15:22 Received: 03/27/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.18 ± 0.324 (0.196) C:81% T:NA**	pCi/L	04/09/18 07:47	13982-63-3	
Radium-228	EPA 9320	**0.431 ± 0.527 (1.12) C:69% T:73%**	pCi/L	04/10/18 10:18	15262-20-1	
Total Radium	Total Radium Calculation	**1.61 ± 0.851 (1.32)**	pCi/L	04/12/18 11:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: FBL032618 **Lab ID: 263269010** Collected: 03/26/18 16:32 Received: 03/27/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.183 ± 0.126 (0.191) C:77% T:NA**	pCi/L	04/09/18 07:47	13982-63-3	
Radium-228	EPA 9320	**-0.201 ± 0.417 (1.02) C:66% T:72%**	pCi/L	04/10/18 10:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.183 ± 0.543 (1.21)**	pCi/L	04/12/18 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Sample: EQBL032618 **Lab ID: 263269012** Collected: 03/26/18 16:38 Received: 03/27/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.277 ± 0.145 (0.199) C:96% T:NA**	pCi/L	04/09/18 07:47	13982-63-3	
Radium-228	EPA 9320	**0.491 ± 0.426 (0.861) C:73% T:72%**	pCi/L	04/10/18 10:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.768 ± 0.571 (1.06)**	pCi/L	04/12/18 11:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

QC Batch: 293334 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 263269002, 263269004, 263269006, 263269008, 263269010, 263269012

METHOD BLANK: 1435520 Matrix: Water
Associated Lab Samples: 263269002, 263269004, 263269006, 263269008, 263269010, 263269012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.451 ± 0.388 (0.783) C:77% T:72%	pCi/L	04/10/18 10:18	

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
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

QC Batch: 293407 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 263269002, 263269004, 263269006, 263269008, 263269010, 263269012

METHOD BLANK: 1436214 Matrix: Water
Associated Lab Samples: 263269002, 263269004, 263269006, 263269008, 263269010, 263269012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.143 ± 0.102 (0.146) C:89% T:NA	pCi/L	04/09/18 07:47	

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

Pace Analytical Services, LLC
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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

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-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 263269

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263269001	**BGWA-2**	EPA 3005A	3319	EPA 6020B	3454
263269003	**BGWC-8**	EPA 3005A	3319	EPA 6020B	3454
263269005	**BGWA-29**	EPA 3005A	3319	EPA 6020B	3454
263269007	**BGWC-30**	EPA 3005A	3319	EPA 6020B	3454
263269009	**FBL032618**	EPA 3005A	3319	EPA 6020B	3454
263269011	**EQBL032618**	EPA 3005A	3319	EPA 6020B	3454
263269001	**BGWA-2**	EPA 7470A	3394	EPA 7470A	3433
263269003	**BGWC-8**	EPA 7470A	3394	EPA 7470A	3433
263269005	**BGWA-29**	EPA 7470A	3394	EPA 7470A	3433
263269007	**BGWC-30**	EPA 7470A	3394	EPA 7470A	3433
263269009	**FBL032618**	EPA 7470A	3394	EPA 7470A	3433
263269011	**EQBL032618**	EPA 7470A	3394	EPA 7470A	3433
263269002	**BGWA-2**	EPA 9315	293407		
263269004	**BGWC-8**	EPA 9315	293407		
263269006	**BGWA-29**	EPA 9315	293407		
263269008	**BGWC-30**	EPA 9315	293407		
263269010	**FBL032618**	EPA 9315	293407		
263269012	**EQBL032618**	EPA 9315	293407		
263269002	**BGWA-2**	EPA 9320	293334		
263269004	**BGWC-8**	EPA 9320	293334		
263269006	**BGWA-29**	EPA 9320	293334		
263269008	**BGWC-30**	EPA 9320	293334		
263269010	**FBL032618**	EPA 9320	293334		
263269012	**EQBL032618**	EPA 9320	293334		
263269002	**BGWA-2**	Total Radium Calculation	294436		
263269004	**BGWC-8**	Total Radium Calculation	294436		
263269006	**BGWA-29**	Total Radium Calculation	294436		
263269008	**BGWC-30**	Total Radium Calculation	294436		
263269010	**FBL032618**	Total Radium Calculation	294436		
263269012	**EQBL032618**	Total Radium Calculation	294436		
263269001	**BGWA-2**	EPA 300.0	3334		
263269003	**BGWC-8**	EPA 300.0	3334		
263269005	**BGWA-29**	EPA 300.0	3334		
263269007	**BGWC-30**	EPA 300.0	3334		
263269009	**FBL032618**	EPA 300.0	3334		
263269011	**EQBL032618**	EPA 300.0	3334		

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: Southern Company Services

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE BIN 10185 Atlanta, GA 30308

REPORT TO: Joju Abraham CC: Maria Padilla

REQUESTED COMPLETION DATE: PO #: GPC10684198

PROJECT NAME/STATE: Plant Bowen Ash Pond CCR

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III EPA 6020, 7470 (P / 3)	Fluoride EPA 300 (P / 7)	Radium 226/228 9315 #9320 SW-846 (P / 3)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
3/26/18	1036	GW		x	BGWA-2	4	1	1	2		
3/26/18	1418	GW		x	BGWC-8	4	1	1	2		
3/26/18	1328	GW		x	BGWA-29	4	1	1	2		
3/26/18	1522	GW		x	BGWC-30	4	1	1	2		
3/26/18	1632	W		x	FBL032618	4	1	1	2		
3/26/18	1638	W		x	EQBL032618	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; 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#: 263269
263269

SAMPLED BY AND TITLE: [illegible] DATE/TIME: 3/26/18 @ 1341

RECEIVED BY: Mike Nguyen DATE/TIME: 3/27/18 1014

RECEIVED BY LAB: [signature] DATE/TIME: 03/27/18 1130

RELINQUISHED BY: Cindy Mardis DATE/TIME: 3/27/18 10:14

RELINQUISHED BY: DATE/TIME:

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

Checked: (Yes) No NA Ice: (Yes) No NA Temperature: Min: 1.3 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# : 263269

PM: BM Due Date: 04/03/18

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

Biological Tissue is Frozen: Yes No

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 3/27/18 MR

Cooler Temperature 1.3

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	Initial when completed / Lot # of added preservative
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		
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 24, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 30, 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Lab ID	Sample ID	Matrix	Date Collected	Date Received
263436001	**BGWC-7**	Water	03/27/18 09:00	03/30/18 15:45
263436002	**BGWC-7**	Water	03/27/18 09:00	03/30/18 15:45
263436003	**BGWC-10**	Water	03/27/18 15:50	03/30/18 15:45
263436004	**BGWC-10**	Water	03/27/18 15:50	03/30/18 15:45
263436005	**BGWC-16**	Water	03/27/18 10:36	03/30/18 15:45
263436006	**BGWC-16**	Water	03/27/18 10:36	03/30/18 15:45
263436007	**BGWC-19**	Water	03/27/18 15:48	03/30/18 15:45
263436008	**BGWC-19**	Water	03/27/18 15:48	03/30/18 15:45
263436009	**BGWC-18**	Water	03/27/18 14:21	03/30/18 15:45
263436010	**BGWC-18**	Water	03/27/18 14:21	03/30/18 15:45
263436011	**BGWC-17**	Water	03/27/18 12:40	03/30/18 15:45
263436012	**BGWC-17**	Water	03/27/18 12:40	03/30/18 15:45
263436013	**BGWC-9**	Water	03/27/18 10:40	03/30/18 15:45
263436014	**BGWC-9**	Water	03/27/18 10:40	03/30/18 15:45
263436015	**Dup-1**	Water	03/27/18 00:00	03/30/18 15:45
263436016	**Dup-1**	Water	03/27/18 00:00	03/30/18 15:45
263436017	**FBL032718**	Water	03/27/18 15:46	03/30/18 15:45
263436018	**FBL032718**	Water	03/27/18 15:46	03/30/18 15:45
263436019	**EQBL032718**	Water	03/27/18 16:00	03/30/18 15:45
263436020	**EQBL032718**	Water	03/27/18 16:00	03/30/18 15:45

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
263436001	**BGWC-7**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436002	**BGWC-7**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436003	**BGWC-10**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436004	**BGWC-10**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436005	**BGWC-16**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436006	**BGWC-16**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436007	**BGWC-19**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436008	**BGWC-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436009	**BGWC-18**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436010	**BGWC-18**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436011	**BGWC-17**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436012	**BGWC-17**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436013	**BGWC-9**	EPA 6020B	CSW	12	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436014	**BGWC-9**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436015	**Dup-1**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436016	**Dup-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263436017	**FBL032718**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436018	**FBL032718**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263436019	**EQBL032718**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263436020	**EQBL032718**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-7 **Lab ID: 263436001** Collected: 03/27/18 09:00 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:03	7440-36-0	
Arsenic	**0.0028J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:03	7440-38-2	
Barium	**0.039**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:03	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:03	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:03	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:03	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:03	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:03	7439-92-1	
Lithium	**0.0087J**	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:03	7439-93-2	
Molybdenum	**0.010**	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:03	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:03	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 17:57	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/03/18 22:44	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-10 **Lab ID: 263436003** Collected: 03/27/18 15:50 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:08	7440-36-0	
Arsenic	**0.0064**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:08	7440-38-2	
Barium	**0.051**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:08	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:08	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:08	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:08	7439-92-1	
Lithium	**0.0025J**	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:08	7439-93-2	
Molybdenum	**0.0032J**	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:17	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/03/18 23:48	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-16 **Lab ID: 263436005** Collected: 03/27/18 10:36 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:14	7440-36-0	
Arsenic	**0.0014J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:14	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:14	7440-41-7	
Cadmium	**0.0013**	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:14	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:14	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:14	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:14	7782-49-2	
Thallium	**0.00019J**	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:19	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 00:09	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-19 **Lab ID: 263436007** Collected: 03/27/18 15:48 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:20	7440-36-0	
Arsenic	**0.00082J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:20	7440-38-2	
Barium	**0.029**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:20	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:20	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:20	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:20	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:22	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 00:30	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-18 **Lab ID: 263436009** Collected: 03/27/18 14:21 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:25	7440-36-0	
Arsenic	**0.00066J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:25	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:25	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:25	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:25	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:25	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:24	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 00:51	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-17 **Lab ID: 263436011** Collected: 03/27/18 12:40 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:46	7440-36-0	
Arsenic	**0.00076J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:46	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:46	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:46	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:46	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:46	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:46	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:31	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.33**	mg/L	0.30	0.029	1		04/04/18 01:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-9 **Lab ID: 263436013** Collected: 03/27/18 10:40 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 15:52	7440-36-0	
Arsenic	**0.0021J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 15:52	7440-38-2	
Barium	**0.026**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 15:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 15:52	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 15:52	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 15:52	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 15:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 15:52	7439-92-1	
Lithium	**0.0014J**	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 15:52	7439-93-2	
Molybdenum	**0.0031J**	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 15:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 15:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 15:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:34	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.36**	mg/L	0.30	0.029	1		04/04/18 01:34	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: Dup-1 **Lab ID: 263436015** Collected: 03/27/18 00:00 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 16:03	7440-36-0	
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 16:03	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 16:03	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 16:03	7440-41-7	
Cadmium	**0.0013**	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 16:03	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 16:03	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 16:03	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 16:03	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 16:03	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 16:03	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 16:03	7782-49-2	
Thallium	**0.00020J**	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 16:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:36	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 01:55	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: FBL032718 **Lab ID: 263436017** Collected: 03/27/18 15:46 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 16:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 16:09	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 16:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 16:09	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 16:09	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 16:09	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 16:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 16:09	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 16:09	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 16:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 16:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 16:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:39	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 03:41	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: EQBL032718 **Lab ID: 263436019** Collected: 03/27/18 16:00 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 11:50	04/03/18 16:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/02/18 11:50	04/03/18 16:14	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/02/18 11:50	04/03/18 16:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 11:50	04/03/18 16:14	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 11:50	04/03/18 16:14	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 11:50	04/03/18 16:14	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 11:50	04/03/18 16:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 11:50	04/03/18 16:14	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 11:50	04/03/18 16:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 11:50	04/03/18 16:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 11:50	04/03/18 16:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 11:50	04/03/18 16:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:41	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 04:02	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

QC Batch: 3612 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 263436001, 263436003, 263436005, 263436007, 263436009, 263436011, 263436013, 263436015, 263436017, 263436019

METHOD BLANK: 18415 Matrix: Water
Associated Lab Samples: 263436001, 263436003, 263436005, 263436007, 263436009, 263436011, 263436013, 263436015, 263436017, 263436019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	04/06/18 17:50	

LABORATORY CONTROL SAMPLE: 18416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0023	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 19855 19856

Parameter	Units	263436001 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	0.0025	91	98	75-125	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

QC Batch: 3540 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 263436001, 263436003, 263436005, 263436007, 263436009, 263436011, 263436013, 263436015, 263436017, 263436019

METHOD BLANK: 18161 Matrix: Water
Associated Lab Samples: 263436001, 263436003, 263436005, 263436007, 263436009, 263436011, 263436013, 263436015, 263436017, 263436019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/03/18 13:26	
Arsenic	mg/L	ND	0.0050	0.00057	04/03/18 13:26	
Barium	mg/L	ND	0.010	0.00078	04/03/18 13:26	
Beryllium	mg/L	ND	0.0030	0.000050	04/03/18 13:26	
Cadmium	mg/L	ND	0.0010	0.000093	04/03/18 13:26	
Chromium	mg/L	ND	0.010	0.0016	04/03/18 13:26	
Cobalt	mg/L	ND	0.010	0.00052	04/03/18 13:26	
Lead	mg/L	ND	0.0050	0.00027	04/03/18 13:26	
Lithium	mg/L	ND	0.050	0.00097	04/03/18 13:26	
Molybdenum	mg/L	ND	0.010	0.0019	04/03/18 13:26	
Selenium	mg/L	ND	0.010	0.0014	04/03/18 13:26	
Thallium	mg/L	ND	0.0010	0.00014	04/03/18 13:26	

LABORATORY CONTROL SAMPLE: 18162

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	0.098	98	80-120	
Beryllium	mg/L	.1	0.097	97	80-120	
Cadmium	mg/L	.1	0.095	95	80-120	
Chromium	mg/L	.1	0.10	101	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.094	94	80-120	
Lithium	mg/L	.1	0.096	96	80-120	
Molybdenum	mg/L	.1	0.10	102	80-120	
Selenium	mg/L	.1	0.096	96	80-120	
Thallium	mg/L	.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18163 18164

Parameter	Units	263338001 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	0.099	0.099	99	99	75-125	0	20	
Arsenic	mg/L	0.00061J	.1	.1	0.096	0.096	95	95	75-125	0	20	
Barium	mg/L	0.021	.1	.1	0.12	0.12	96	95	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.099	0.10	99	101	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18163 18164

Parameter	Units	263338001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	ND	.1	.1	0.096	0.095	96	95	75-125	0	20	
Chromium	mg/L	ND	.1	.1	0.10	0.11	103	104	75-125	2	20	
Cobalt	mg/L	ND	.1	.1	0.10	0.10	102	99	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.096	0.093	96	93	75-125	3	20	
Lithium	mg/L	0.0024J	.1	.1	0.098	0.10	96	97	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20	
Selenium	mg/L	ND	.1	.1	0.093	0.095	92	94	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.098	0.093	97	93	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

QC Batch: 3696 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 263436001, 263436003, 263436005, 263436007, 263436009, 263436011, 263436013, 263436015, 263436017, 263436019

METHOD BLANK: 18738 Matrix: Water
Associated Lab Samples: 263436001, 263436003, 263436005, 263436007, 263436009, 263436011, 263436013, 263436015, 263436017, 263436019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	04/03/18 21:19	

LABORATORY CONTROL SAMPLE: 18739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18740 18741

Parameter	Units	263436001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	10.7	10.7	106	105	90-110	0	15	

MATRIX SPIKE SAMPLE: 18742

Parameter	Units	263436003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	10.9	109	90-110	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-7 **Lab ID: 263436002** Collected: 03/27/18 09:00 Received: 03/30/18 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	**1.40 ± 0.450 (0.288) C:88% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.750 ± 0.443 (0.824) C:74% T:79%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**2.15 ± 0.893 (1.11)**	pCi/L	04/18/18 14:08	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-10 **Lab ID: 263436004** Collected: 03/27/18 15:50 Received: 03/30/18 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	**0.657 ± 0.324 (0.380) C:76% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.122 ± 0.433 (0.971) C:78% T:82%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.779 ± 0.757 (1.35)**	pCi/L	04/18/18 14:08	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-16 **Lab ID: 263436006** Collected: 03/27/18 10:36 Received: 03/30/18 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	**0.399 ± 0.251 (0.374) C:88% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.944 ± 0.482 (0.845) C:73% T:77%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.34 ± 0.733 (1.22)**	pCi/L	04/18/18 14:08	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-19 **Lab ID: 263436008** Collected: 03/27/18 15:48 Received: 03/30/18 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	**0.169 ± 0.178 (0.337) C:89% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**-0.283 ± 0.335 (0.835) C:71% T:83%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.169 ± 0.513 (1.17)**	pCi/L	04/18/18 14:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-18 **Lab ID: 263436010** Collected: 03/27/18 14:21 Received: 03/30/18 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	**0.429 ± 0.244 (0.324) C:93% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.140 ± 0.334 (0.742) C:74% T:89%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.569 ± 0.578 (1.07)**	pCi/L	04/18/18 14:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-17 **Lab ID: 263436012** Collected: 03/27/18 12:40 Received: 03/30/18 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	**0.203 ± 0.211 (0.413) C:89% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.348 ± 0.372 (0.777) C:75% T:82%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.551 ± 0.583 (1.19)**	pCi/L	04/18/18 14:08	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: BGWC-9 **Lab ID: 263436014** Collected: 03/27/18 10:40 Received: 03/30/18 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	**0.427 ± 0.280 (0.442) C:79% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.318 ± 0.309 (0.630) C:77% T:83%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.745 ± 0.589 (1.07)**	pCi/L	04/18/18 14:08	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: Dup-1 **Lab ID: 263436016** Collected: 03/27/18 00:00 Received: 03/30/18 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	**0.472 ± 0.268 (0.365) C:86% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.247 ± 0.452 (0.989) C:67% T:81%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.719 ± 0.720 (1.35)**	pCi/L	04/18/18 14:08	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: FBL032718 **Lab ID: 263436018** Collected: 03/27/18 15:46 Received: 03/30/18 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	**0.173 ± 0.199 (0.392) C:78% T:NA**	pCi/L	04/12/18 11:40	13982-63-3	
Radium-228	EPA 9320	**0.135 ± 0.374 (0.839) C:73% T:74%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.308 ± 0.573 (1.23)**	pCi/L	04/23/18 13:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

Sample: EQBL032718 **Lab ID: 263436020** Collected: 03/27/18 16:00 Received: 03/30/18 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	**0.0985 ± 0.162 (0.358) C:87% T:NA**	pCi/L	04/12/18 11:44	13982-63-3	
Radium-228	EPA 9320	**-0.0400 ± 0.359 (0.843) C:71% T:82%**	pCi/L	04/17/18 13:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.0985 ± 0.521 (1.20)**	pCi/L	04/23/18 13:05	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

QC Batch: 293707 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 263436002, 263436004, 263436006, 263436008, 263436010, 263436012, 263436014, 263436016, 263436018, 263436020

METHOD BLANK: 1437861 Matrix: Water
Associated Lab Samples: 263436002, 263436004, 263436006, 263436008, 263436010, 263436012, 263436014, 263436016, 263436018, 263436020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.115 ± 0.285 (0.637) C:79% T:87%	pCi/L	04/17/18 13:46	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

QC Batch: 293706 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 263436002, 263436004, 263436006, 263436008, 263436010, 263436012, 263436014, 263436016, 263436018, 263436020

METHOD BLANK: 1437860 Matrix: Water
Associated Lab Samples: 263436002, 263436004, 263436006, 263436008, 263436010, 263436012, 263436014, 263436016, 263436018, 263436020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0134 ± 0.160 (0.434) C:81% T:NA	pCi/L	04/12/18 09:11	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 263436

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-GA	Pace Analytical Services - Atlanta, GA
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 Bowen Ash Pond
Pace Project No.: 263436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263436001	BGWC-7	EPA 3005A	3540	EPA 6020B	3662
263436003	BGWC-10	EPA 3005A	3540	EPA 6020B	3662
263436005	BGWC-16	EPA 3005A	3540	EPA 6020B	3662
263436007	BGWC-19	EPA 3005A	3540	EPA 6020B	3662
263436009	BGWC-18	EPA 3005A	3540	EPA 6020B	3662
263436011	BGWC-17	EPA 3005A	3540	EPA 6020B	3662
263436013	BGWC-9	EPA 3005A	3540	EPA 6020B	3662
263436015	Dup-1	EPA 3005A	3540	EPA 6020B	3662
263436017	FBL032718	EPA 3005A	3540	EPA 6020B	3662
263436019	EQBL032718	EPA 3005A	3540	EPA 6020B	3662
263436001	BGWC-7	EPA 7470A	3612	EPA 7470A	3908
263436003	BGWC-10	EPA 7470A	3612	EPA 7470A	3908
263436005	BGWC-16	EPA 7470A	3612	EPA 7470A	3908
263436007	BGWC-19	EPA 7470A	3612	EPA 7470A	3908
263436009	BGWC-18	EPA 7470A	3612	EPA 7470A	3908
263436011	BGWC-17	EPA 7470A	3612	EPA 7470A	3908
263436013	BGWC-9	EPA 7470A	3612	EPA 7470A	3908
263436015	Dup-1	EPA 7470A	3612	EPA 7470A	3908
263436017	FBL032718	EPA 7470A	3612	EPA 7470A	3908
263436019	EQBL032718	EPA 7470A	3612	EPA 7470A	3908
263436002	BGWC-7	EPA 9315	293706		
263436004	BGWC-10	EPA 9315	293706		
263436006	BGWC-16	EPA 9315	293706		
263436008	BGWC-19	EPA 9315	293706		
263436010	BGWC-18	EPA 9315	293706		
263436012	BGWC-17	EPA 9315	293706		
263436014	BGWC-9	EPA 9315	293706		
263436016	Dup-1	EPA 9315	293706		
263436018	FBL032718	EPA 9315	293706		
263436020	EQBL032718	EPA 9315	293706		
263436002	BGWC-7	EPA 9320	293707		
263436004	BGWC-10	EPA 9320	293707		
263436006	BGWC-16	EPA 9320	293707		
263436008	BGWC-19	EPA 9320	293707		
263436010	BGWC-18	EPA 9320	293707		
263436012	BGWC-17	EPA 9320	293707		
263436014	BGWC-9	EPA 9320	293707		
263436016	Dup-1	EPA 9320	293707		
263436018	FBL032718	EPA 9320	293707		
263436020	EQBL032718	EPA 9320	293707		
263436002	BGWC-7	Total Radium Calculation	295143		
263436004	BGWC-10	Total Radium Calculation	295143		
263436006	BGWC-16	Total Radium Calculation	295143		
263436008	BGWC-19	Total Radium Calculation	295143		
263436010	BGWC-18	Total Radium Calculation	295143		
263436012	BGWC-17	Total Radium Calculation	295143		
263436014	BGWC-9	Total Radium Calculation	295143		

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 Bowen Ash Pond
Pace Project No.: 263436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263436016	**Dup-1**	Total Radium Calculation	295143		
263436018	**FBL032718**	Total Radium Calculation	295607		
263436020	**EQBL032718**	Total Radium Calculation	295607		
263436001	**BGWC-7**	EPA 300.0	3696		
263436003	**BGWC-10**	EPA 300.0	3696		
263436005	**BGWC-16**	EPA 300.0	3696		
263436007	**BGWC-19**	EPA 300.0	3696		
263436009	**BGWC-18**	EPA 300.0	3696		
263436011	**BGWC-17**	EPA 300.0	3696		
263436013	**BGWC-9**	EPA 300.0	3696		
263436015	**Dup-1**	EPA 300.0	3696		
263436017	**FBL032718**	EPA 300.0	3696		
263436019	**EQBL032718**	EPA 300.0	3696		

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: Southern Company Services
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308
REPORT TO: Joju Abraham
CC: Maria Padilla
REQUESTED COMPLETION DATE:
PO #: GPC10684HAB
PROJECT NAME/STATE: Plant Bowen Ash Pond CCR
PROJECT #:

ANALYSIS REQUESTED

		Metals App. III EPA 6020, 7470	Fluoride EPA 300	Radium 226/228 9315/9320 SW846
CONTAINER TYPE:		P	P	P
PRESERVATION:		3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III EPA 6020, 7470	Fluoride EPA 300	Radium 226/228 9315/9320 SW846	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
3/27/18	0900	GW			BGWC-7		X	X	X 2	1/2	1/2
3/27/18	1550	GW			BGWC-10		X	X	X 2	3/4	3/4
3/27/18	1036	GW			BGWC-16		X	X	X 4	5/6	5/6
3/27/18	1548	GW			BGWC-19		X	X	X 2	7	7/8
3/27/18	1421	GW			BGWC-18		X	X	X 2	8/9	9/10
3/27/18	1240	GW			BGWC-17		X	X	X 2	10/11	11/12
3/27/18	1040	GW			BGWC-9		X	X	X 2	12/13	13/14
3/27/18	—	GW			DUP-1		X	X	X 2	14/15	15/16
3/27/18	1546	W			FBL032718		X	X	X 2	16/17	17/18
3/27/18	1600	W			EQBL032718		X	X	X 2	18	CH 3/30/18 19/20

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: [illegible] DATE/TIME: 3/27/18 @ 1646
RECEIVED BY: Mike Nguyen DATE/TIME: 3/30/18 0933
RECEIVED BY LAB: [signature] DATE/TIME: 3/30/18 1545
RELINQUISHED BY: DATE/TIME:
RELINQUISHED BY: DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS
# of Coolers Cooler ID:
Custody Seal: (Intact) Broken Not Present N/A
pH checked: (Yes) No NA
Ice: (Yes) No NA
Temperature: Min: 1.0°C Max:

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

WO#: 263436
263436

Sample Condition Upon Receipt

Pace Analytical

Client Name: Georgia Power

WO# : 263436

PM: BM Due Date: 04/06/18

CLIENT: GAPower-CCR

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

Tracking #:

Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used THR032 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.0°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/30/18 CM

Temp should be above freezing to 6°C

Comments:

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: GW			
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)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 24, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 30, 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Lab ID	Sample ID	Matrix	Date Collected	Date Received
263437001	**BGWC-20**	Water	03/28/18 13:00	03/30/18 15:45
263437002	**BGWC-20**	Water	03/28/18 13:00	03/30/18 15:45
263437003	**BGWC-21**	Water	03/28/18 15:16	03/30/18 15:45
263437004	**BGWC-21**	Water	03/28/18 15:16	03/30/18 15:45
263437005	**BGWC-12**	Water	03/28/18 10:32	03/30/18 15:45
263437006	**BGWC-12**	Water	03/28/18 10:32	03/30/18 15:45
263437007	**BGWC-25**	Water	03/28/18 16:16	03/30/18 15:45
263437008	**BGWC-25**	Water	03/28/18 16:16	03/30/18 15:45
263437009	**Dup-2**	Water	03/28/18 00:00	03/30/18 15:45
263437010	**Dup-2**	Water	03/28/18 00:00	03/30/18 15:45

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
263437001	**BGWC-20**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263437002	**BGWC-20**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263437003	**BGWC-21**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263437004	**BGWC-21**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263437005	**BGWC-12**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263437006	**BGWC-12**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263437007	**BGWC-25**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263437008	**BGWC-25**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263437009	**Dup-2**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263437010	**Dup-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-20 **Lab ID: 263437001** Collected: 03/28/18 13:00 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 20:42	7440-36-0	
Arsenic	**0.0018J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 20:42	7440-38-2	
Barium	**0.030**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 20:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 20:42	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 20:42	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 20:42	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 20:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/03/18 20:42	7439-92-1	
Lithium	**0.013J**	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 20:42	7439-93-2	
Molybdenum	**0.012**	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 20:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 20:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 20:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:43	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 04:45	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-21 **Lab ID: 263437003** Collected: 03/28/18 15:16 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:05	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:05	7440-38-2	
Barium	**0.043**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:05	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:05	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:05	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/03/18 21:05	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:46	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 05:06	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-12 **Lab ID: 263437005** Collected: 03/28/18 10:32 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:10	7440-36-0	
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:10	7440-38-2	
Barium	**0.034**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:10	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:10	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:10	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/03/18 21:10	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:48	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 05:27	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-25 **Lab ID: 263437007** Collected: 03/28/18 16:16 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:16	7440-36-0	
Arsenic	**0.0019J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:16	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:16	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:16	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:16	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/03/18 21:16	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 18:50	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 05:48	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: Dup-2 **Lab ID: 263437009** Collected: 03/28/18 00:00 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:22	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:22	7440-38-2	
Barium	**0.031**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:22	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:22	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:22	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/03/18 21:22	7439-92-1	
Lithium	**0.015J**	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:22	7439-93-2	
Molybdenum	**0.013**	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:40	04/06/18 19:01	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 06:10	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

QC Batch: 3612 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 263437001, 263437003, 263437005, 263437007, 263437009

METHOD BLANK: 18415 Matrix: Water
Associated Lab Samples: 263437001, 263437003, 263437005, 263437007, 263437009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	04/06/18 17:50	

LABORATORY CONTROL SAMPLE: 18416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0023	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 19855 19856

Parameter	Units	263436001 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	0.0025	91	98	75-125	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

QC Batch: 3569 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 263437001, 263437003, 263437005, 263437007, 263437009

METHOD BLANK: 18245 Matrix: Water
Associated Lab Samples: 263437001, 263437003, 263437005, 263437007, 263437009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/03/18 20:31	
Arsenic	mg/L	ND	0.0050	0.00057	04/03/18 20:31	
Barium	mg/L	ND	0.010	0.00078	04/03/18 20:31	
Beryllium	mg/L	ND	0.0030	0.000050	04/03/18 20:31	
Cadmium	mg/L	ND	0.0010	0.000093	04/03/18 20:31	
Chromium	mg/L	ND	0.010	0.0016	04/03/18 20:31	
Cobalt	mg/L	ND	0.010	0.00052	04/03/18 20:31	
Lead	mg/L	ND	0.0050	0.00027	04/03/18 20:31	
Lithium	mg/L	ND	0.050	0.00097	04/03/18 20:31	
Molybdenum	mg/L	ND	0.010	0.0019	04/03/18 20:31	
Selenium	mg/L	ND	0.010	0.0014	04/03/18 20:31	
Thallium	mg/L	ND	0.0010	0.00014	04/03/18 20:31	

LABORATORY CONTROL SAMPLE: 18246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.099	99	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.095	95	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Cadmium	mg/L	.1	0.098	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.099	99	80-120	
Lead	mg/L	.1	0.095	95	80-120	
Lithium	mg/L	.1	0.10	105	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.098	98	80-120	
Thallium	mg/L	.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18247 18248

Parameter	Units	263437001 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	103	104	75-125	1	20	
Arsenic	mg/L	0.0018J	.1	.1	0.11	0.11	108	106	75-125	2	20	
Barium	mg/L	0.030	.1	.1	0.13	0.13	104	104	75-125	0	20	
Beryllium	mg/L	ND	.1	.1	0.098	0.095	98	95	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.098	0.095	98	95	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18247 18248

Parameter	Units	263437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	0	20	
Cobalt	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.092	0.093	92	93	75-125	1	20	
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	102	101	75-125	1	20	
Molybdenum	mg/L	0.012	.1	.1	0.12	0.12	109	110	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.11	0.10	106	103	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.095	0.096	95	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

QC Batch: 3696 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 263437001, 263437003, 263437005, 263437007, 263437009

METHOD BLANK: 18738 Matrix: Water
Associated Lab Samples: 263437001, 263437003, 263437005, 263437007, 263437009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	04/03/18 21:19	

LABORATORY CONTROL SAMPLE: 18739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18740 18741

Parameter	Units	263436001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	10.7	10.7	106	105	90-110	0	15	

MATRIX SPIKE SAMPLE: 18742

Parameter	Units	263436003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	10.9	109	90-110	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-20 **Lab ID: 263437002** Collected: 03/28/18 13:00 Received: 03/30/18 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	**0.916 ± 0.349 (0.324) C:95% T:NA**	pCi/L	04/12/18 11:44	13982-63-3	
Radium-228	EPA 9320	**0.0535 ± 0.339 (0.780) C:73% T:74%**	pCi/L	04/17/18 13:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.970 ± 0.688 (1.10)**	pCi/L	04/23/18 13:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-21 **Lab ID: 263437004** Collected: 03/28/18 15:16 Received: 03/30/18 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	**0.595 ± 0.275 (0.269) C:94% T:NA**	pCi/L	04/12/18 13:16	13982-63-3	
Radium-228	EPA 9320	**0.269 ± 0.327 (0.692) C:78% T:83%**	pCi/L	04/17/18 13:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.864 ± 0.602 (0.961)**	pCi/L	04/23/18 13:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-12 **Lab ID: 263437006** Collected: 03/28/18 10:32 Received: 03/30/18 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	**0.360 ± 0.234 (0.338) C:84% T:NA**	pCi/L	04/12/18 13:16	13982-63-3	
Radium-228	EPA 9320	**-0.0206 ± 0.323 (0.757) C:74% T:84%**	pCi/L	04/17/18 13:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.360 ± 0.557 (1.10)**	pCi/L	04/23/18 13:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: BGWC-25 **Lab ID: 263437008** Collected: 03/28/18 16:16 Received: 03/30/18 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	**0.411 ± 0.242 (0.343) C:95% T:NA**	pCi/L	04/12/18 13:16	13982-63-3	
Radium-228	EPA 9320	**0.0960 ± 0.279 (0.628) C:75% T:88%**	pCi/L	04/17/18 13:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.507 ± 0.521 (0.971)**	pCi/L	04/23/18 13:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Sample: Dup-2 **Lab ID: 263437010** Collected: 03/28/18 00:00 Received: 03/30/18 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	**0.422 ± 0.235 (0.310) C:95% T:NA**	pCi/L	04/12/18 13:16	13982-63-3	
Radium-228	EPA 9320	**0.163 ± 0.375 (0.833) C:74% T:74%**	pCi/L	04/17/18 13:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.585 ± 0.610 (1.14)**	pCi/L	04/23/18 13:05	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

QC Batch: 293707 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 263437002, 263437004, 263437006, 263437008, 263437010

METHOD BLANK: 1437861 Matrix: Water
Associated Lab Samples: 263437002, 263437004, 263437006, 263437008, 263437010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.115 ± 0.285 (0.637) C:79% T:87%	pCi/L	04/17/18 13:46	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

QC Batch: 293706 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 263437002, 263437004, 263437006, 263437008, 263437010

METHOD BLANK: 1437860 Matrix: Water
Associated Lab Samples: 263437002, 263437004, 263437006, 263437008, 263437010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0134 ± 0.160 (0.434) C:81% T:NA	pCi/L	04/12/18 09:11	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

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-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

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110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 263437

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263437001	**BGWC-20**	EPA 3005A	3569	EPA 6020B	3691
263437003	**BGWC-21**	EPA 3005A	3569	EPA 6020B	3691
263437005	**BGWC-12**	EPA 3005A	3569	EPA 6020B	3691
263437007	**BGWC-25**	EPA 3005A	3569	EPA 6020B	3691
263437009	**Dup-2**	EPA 3005A	3569	EPA 6020B	3691
263437001	**BGWC-20**	EPA 7470A	3612	EPA 7470A	3908
263437003	**BGWC-21**	EPA 7470A	3612	EPA 7470A	3908
263437005	**BGWC-12**	EPA 7470A	3612	EPA 7470A	3908
263437007	**BGWC-25**	EPA 7470A	3612	EPA 7470A	3908
263437009	**Dup-2**	EPA 7470A	3612	EPA 7470A	3908
263437002	**BGWC-20**	EPA 9315	293706		
263437004	**BGWC-21**	EPA 9315	293706		
263437006	**BGWC-12**	EPA 9315	293706		
263437008	**BGWC-25**	EPA 9315	293706		
263437010	**Dup-2**	EPA 9315	293706		
263437002	**BGWC-20**	EPA 9320	293707		
263437004	**BGWC-21**	EPA 9320	293707		
263437006	**BGWC-12**	EPA 9320	293707		
263437008	**BGWC-25**	EPA 9320	293707		
263437010	**Dup-2**	EPA 9320	293707		
263437002	**BGWC-20**	Total Radium Calculation	295607		
263437004	**BGWC-21**	Total Radium Calculation	295607		
263437006	**BGWC-12**	Total Radium Calculation	295607		
263437008	**BGWC-25**	Total Radium Calculation	295607		
263437010	**Dup-2**	Total Radium Calculation	295607		
263437001	**BGWC-20**	EPA 300.0	3696		
263437003	**BGWC-21**	EPA 300.0	3696		
263437005	**BGWC-12**	EPA 300.0	3696		
263437007	**BGWC-25**	EPA 300.0	3696		
263437009	**Dup-2**	EPA 300.0	3696		

CHAIN OF CUSTODY RECORD

Pace Analytical
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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: Southern Company Services

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308

REPORT TO: Joju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE:
PO #: GPC 10684198

PROJECT NAME/STATE: Plant Bowen Ash Pond CCR

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App IV EPA 6020, 7470	Flouride EPA 300	Radium 226/228 9315 + 9320 SW-846	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	3	3	
03/28/18	1300	GW			BGWC-20		1	1	4	
03/28/18	1516	GW			BGWC-21		1	1	2	
03/28/18	1032	GW			BGWC-12		1	1	2	
03/28/18	1616	GW			BGWC-25		1	1	2	
03/28/18	—	GW			DUP-2		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# : 263437

263437

SAMPLED BY AND TITLE: Kevin Stephenson / Audrey Fisher
DATE/TIME: 03-28-18 1650

RECEIVED BY: Mike Nguyen
DATE/TIME: 3/30/18 0933

RECEIVED BY/LAB:
DATE/TIME: 03/30/18 1545

RELINQUISHED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace 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 #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO# : 263437

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

PM: BM Due Date: 04/06/18

Tracking #:

CLIENT: GAPower-CCR

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: 3/30/18 AR

			Comments:
Chain of Custody Present:	☑Yes	☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes	☑No ☐N/A	2. sample type missing
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).

F-ALL-C003rev.3, 11September2006

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 24, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 30, 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

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

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SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Lab ID	Sample ID	Matrix	Date Collected	Date Received
263438001	**BGWC-23**	Water	03/29/18 12:32	03/30/18 15:45
263438002	**BGWC-23**	Water	03/29/18 12:32	03/30/18 15:45
263438003	**BGWC-14**	Water	03/29/18 09:20	03/30/18 15:45
263438004	**BGWC-14**	Water	03/29/18 09:20	03/30/18 15:45
263438005	**BGWC-24**	Water	03/29/18 13:50	03/30/18 15:45
263438006	**BGWC-24**	Water	03/29/18 13:50	03/30/18 15:45
263438007	**BGWC-22**	Water	03/29/18 11:26	03/30/18 15:45
263438008	**BGWC-22**	Water	03/29/18 11:26	03/30/18 15:45

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
263438001	**BGWC-23**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263438002	**BGWC-23**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263438003	**BGWC-14**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263438004	**BGWC-14**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263438005	**BGWC-24**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263438006	**BGWC-24**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
263438007	**BGWC-22**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		EPA 300.0	RLC	1	PASI-GA
263438008	**BGWC-22**	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

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-23 **Lab ID: 263438001** Collected: 03/29/18 12:32 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:39	7440-36-0	
Arsenic	**0.0028J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:39	7440-38-2	
Barium	**0.085**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:39	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:39	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:39	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/06/18 13:13	7439-92-1	
Lithium	**0.014J**	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:39	7439-93-2	
Molybdenum	**0.013**	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:55	04/06/18 17:26	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 06:31	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-14 **Lab ID: 263438003** Collected: 03/29/18 09:20 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:45	7440-36-0	
Arsenic	**0.0017J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:45	7440-38-2	
Barium	**0.067**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:45	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:45	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:45	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/06/18 13:19	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:45	7439-93-2	
Molybdenum	**0.012**	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:55	04/06/18 17:29	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		04/04/18 06:52	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-24 **Lab ID: 263438005** Collected: 03/29/18 13:50 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:50	7440-36-0	
Arsenic	**0.0075J**	mg/L	0.025	0.0028	5	04/02/18 12:25	04/06/18 13:25	7440-38-2	D3
Barium	**0.080**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:50	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:50	7440-41-7	
Cadmium	**0.0063**	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:50	7440-43-9	
Chromium	ND	mg/L	0.050	0.0078	5	04/02/18 12:25	04/06/18 13:25	7440-47-3	D3
Cobalt	ND	mg/L	0.050	0.0026	5	04/02/18 12:25	04/06/18 13:25	7440-48-4	D3
Lead	ND	mg/L	0.025	0.0014	5	04/02/18 12:25	04/06/18 13:25	7439-92-1	D3
Lithium	**0.0053J**	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:50	7439-93-2	
Molybdenum	**0.0027J**	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:50	7439-98-7	
Selenium	ND	mg/L	0.050	0.0068	5	04/02/18 12:25	04/06/18 13:25	7782-49-2	D3
Thallium	**0.00048J**	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:50	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:55	04/06/18 17:36	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**2.0**	mg/L	0.30	0.029	1		04/04/18 08:39	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-22 **Lab ID: 263438007** Collected: 03/29/18 11:26 Received: 03/30/18 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	mg/L	0.0030	0.00078	1	04/02/18 12:25	04/03/18 21:56	7440-36-0	
Arsenic	**0.0037J**	mg/L	0.0050	0.00057	1	04/02/18 12:25	04/03/18 21:56	7440-38-2	
Barium	**0.088**	mg/L	0.010	0.00078	1	04/02/18 12:25	04/03/18 21:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/02/18 12:25	04/03/18 21:56	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/02/18 12:25	04/03/18 21:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	04/02/18 12:25	04/03/18 21:56	7440-47-3	
Cobalt	**0.016**	mg/L	0.010	0.00052	1	04/02/18 12:25	04/03/18 21:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/02/18 12:25	04/06/18 13:31	7439-92-1	
Lithium	**0.021J**	mg/L	0.050	0.00097	1	04/02/18 12:25	04/03/18 21:56	7439-93-2	
Molybdenum	**0.056**	mg/L	0.010	0.0019	1	04/02/18 12:25	04/03/18 21:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	04/02/18 12:25	04/03/18 21:56	7782-49-2	
Thallium	**0.00063J**	mg/L	0.0010	0.00014	1	04/02/18 12:25	04/03/18 21:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	04/06/18 13:55	04/06/18 17:38	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.58**	mg/L	0.30	0.029	1		04/04/18 09:01	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

QC Batch: 3611 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 263438001, 263438003, 263438005, 263438007

METHOD BLANK: 18413 Matrix: Water
Associated Lab Samples: 263438001, 263438003, 263438005, 263438007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	04/06/18 16:27	

LABORATORY CONTROL SAMPLE: 18414

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: 19801 19802

Parameter	Units	263336001 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	0.0026	104	105	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

QC Batch: 3569 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 263438001, 263438003, 263438005, 263438007

METHOD BLANK: 18245 Matrix: Water
Associated Lab Samples: 263438001, 263438003, 263438005, 263438007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/03/18 20:31	
Arsenic	mg/L	ND	0.0050	0.00057	04/03/18 20:31	
Barium	mg/L	ND	0.010	0.00078	04/03/18 20:31	
Beryllium	mg/L	ND	0.0030	0.000050	04/03/18 20:31	
Cadmium	mg/L	ND	0.0010	0.000093	04/03/18 20:31	
Chromium	mg/L	ND	0.010	0.0016	04/03/18 20:31	
Cobalt	mg/L	ND	0.010	0.00052	04/03/18 20:31	
Lead	mg/L	ND	0.0050	0.00027	04/03/18 20:31	
Lithium	mg/L	ND	0.050	0.00097	04/03/18 20:31	
Molybdenum	mg/L	ND	0.010	0.0019	04/03/18 20:31	
Selenium	mg/L	ND	0.010	0.0014	04/03/18 20:31	
Thallium	mg/L	ND	0.0010	0.00014	04/03/18 20:31	

LABORATORY CONTROL SAMPLE: 18246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.099	99	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.095	95	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Cadmium	mg/L	.1	0.098	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.099	99	80-120	
Lead	mg/L	.1	0.095	95	80-120	
Lithium	mg/L	.1	0.10	105	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.098	98	80-120	
Thallium	mg/L	.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18247 18248

Parameter	Units	263437001 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	103	104	75-125	1	20	
Arsenic	mg/L	0.0018J	.1	.1	0.11	0.11	108	106	75-125	2	20	
Barium	mg/L	0.030	.1	.1	0.13	0.13	104	104	75-125	0	20	
Beryllium	mg/L	ND	.1	.1	0.098	0.095	98	95	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.098	0.095	98	95	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 Bowen Ash Pond
Pace Project No.: 263438

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18247 18248

Parameter	Units	263437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	0	20	
Cobalt	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.092	0.093	92	93	75-125	1	20	
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	102	101	75-125	1	20	
Molybdenum	mg/L	0.012	.1	.1	0.12	0.12	109	110	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.11	0.10	106	103	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.095	0.096	95	96	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 Bowen Ash Pond
Pace Project No.: 263438

QC Batch: 3696 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 263438001, 263438003, 263438005, 263438007

METHOD BLANK: 18738 Matrix: Water
Associated Lab Samples: 263438001, 263438003, 263438005, 263438007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	04/03/18 21:19	

LABORATORY CONTROL SAMPLE: 18739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 18740 18741

Parameter	Units	263436001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	10.7	10.7	106	105	90-110	0	15	

MATRIX SPIKE SAMPLE: 18742

Parameter	Units	263436003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	10.9	109	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-23 **Lab ID: 263438002** Collected: 03/29/18 12:32 Received: 03/30/18 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	**1.11 ± 0.414 (0.410) C:79% T:NA**	pCi/L	04/11/18 09:10	13982-63-3	
Radium-228	EPA 9320	**0.543 ± 0.390 (0.753) C:74% T:78%**	pCi/L	04/10/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.65 ± 0.804 (1.16)**	pCi/L	04/16/18 15:40	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 Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-14 **Lab ID: 263438004** Collected: 03/29/18 09:20 Received: 03/30/18 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	**4.58 ± 1.01 (0.385) C:77% T:NA**	pCi/L	04/11/18 09:10	13982-63-3	
Radium-228	EPA 9320	**1.77 ± 0.568 (0.723) C:77% T:75%**	pCi/L	04/10/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**6.35 ± 1.58 (1.11)**	pCi/L	04/16/18 15:40	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 Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-24 **Lab ID: 263438006** Collected: 03/29/18 13:50 Received: 03/30/18 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	**1.34 ± 0.463 (0.450) C:80% T:NA**	pCi/L	04/11/18 09:10	13982-63-3	
Radium-228	EPA 9320	**1.45 ± 0.542 (0.803) C:78% T:89%**	pCi/L	04/10/18 14:30	15262-20-1	
Total Radium	Total Radium Calculation	**2.79 ± 1.01 (1.25)**	pCi/L	04/16/18 15:40	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 Bowen Ash Pond
Pace Project No.: 263438

Sample: BGWC-22 **Lab ID: 263438008** Collected: 03/29/18 11:26 Received: 03/30/18 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	**1.53 ± 0.514 (0.545) C:91% T:NA**	pCi/L	04/11/18 09:11	13982-63-3	
Radium-228	EPA 9320	**0.902 ± 0.414 (0.675) C:75% T:81%**	pCi/L	04/10/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**2.43 ± 0.928 (1.22)**	pCi/L	04/16/18 15:46	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 Bowen Ash Pond
Pace Project No.: 263438

QC Batch: 293681 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 263438002, 263438004, 263438006, 263438008

METHOD BLANK: 1437735 Matrix: Water
Associated Lab Samples: 263438002, 263438004, 263438006, 263438008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.281 ± 0.226 (0.405) C:96% T:NA	pCi/L	04/11/18 09:10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

QC Batch: 293659 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 263438002, 263438004, 263438006, 263438008

METHOD BLANK: 1437645 Matrix: Water
Associated Lab Samples: 263438002, 263438004, 263438006, 263438008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.474 ± 0.343 (0.651) C:76% T:78%	pCi/L	04/10/18 12:56	

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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 Bowen Ash Pond
Pace Project No.: 263438

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-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 263438

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263438001	**BGWC-23**	EPA 3005A	3569	EPA 6020B	3691
263438003	**BGWC-14**	EPA 3005A	3569	EPA 6020B	3691
263438005	**BGWC-24**	EPA 3005A	3569	EPA 6020B	3691
263438007	**BGWC-22**	EPA 3005A	3569	EPA 6020B	3691
263438001	**BGWC-23**	EPA 7470A	3611	EPA 7470A	3902
263438003	**BGWC-14**	EPA 7470A	3611	EPA 7470A	3902
263438005	**BGWC-24**	EPA 7470A	3611	EPA 7470A	3902
263438007	**BGWC-22**	EPA 7470A	3611	EPA 7470A	3902
263438002	**BGWC-23**	EPA 9315	293681		
263438004	**BGWC-14**	EPA 9315	293681		
263438006	**BGWC-24**	EPA 9315	293681		
263438008	**BGWC-22**	EPA 9315	293681		
263438002	**BGWC-23**	EPA 9320	293659		
263438004	**BGWC-14**	EPA 9320	293659		
263438006	**BGWC-24**	EPA 9320	293659		
263438008	**BGWC-22**	EPA 9320	293659		
263438002	**BGWC-23**	Total Radium Calculation	294834		
263438004	**BGWC-14**	Total Radium Calculation	294834		
263438006	**BGWC-24**	Total Radium Calculation	294834		
263438008	**BGWC-22**	Total Radium Calculation	294834		
263438001	**BGWC-23**	EPA 300.0	3696		
263438003	**BGWC-14**	EPA 300.0	3696		
263438005	**BGWC-24**	EPA 300.0	3696		
263438007	**BGWC-22**	EPA 300.0	3696		

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: Southern Company Services

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308

REPORT TO: Joju Abraham
CC: Maria Padilla

REQUESTED COMPLETION DATE:
PO #: GPC 10684198

PROJECT NAME/STATE:
Plant Bowen Ash Pond CCR

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App IV EPA 6020, 7470	Flouride EPA 300	Radium 226/228 9315 + 9320 SW-846	LAB ID NUMBER
CONTAINER TYPE:							P	P	P	
PRESERVATION:							3	7	3	
03/29/18	1232	GW			BGWC-23		1	1	2	
03/29/18	0920	GW			BGWC-14		1	1	2	
03/29/18	1350	GW			BGWC-24		1	1	2	
03/29/18	1126	GW			BGWC-22		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

REMARKS/ADDITIONAL INFORMATION

WO# : 263438

263438

SAMPLED BY AND TITLE: Kevin Stephenson / Audrey Fisher
DATE/TIME: 03/29/18 1435

RECEIVED BY: Mike Nguyen
DATE/TIME: 3/30/18 0933

RECEIVED BY LAB:
DATE/TIME: 03/30/18 1545

RELINQUISHED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace 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#: 263438

PM: BM Due Date: 04/06/18

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: 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 3/30/18 AR

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☐Yes ☑No ☐N/A	2.	sample type missing
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 16, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266146001	**BGWC-7**	Water	06/13/18 09:34	06/15/18 11:35
266146002	**BGWC-24**	Water	06/13/18 11:24	06/15/18 11:35
266146003	**BGWC-23**	Water	06/13/18 15:10	06/15/18 11:35

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266146001	**BGWC-7**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266146002	**BGWC-24**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266146003	**BGWC-23**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Sample: BGWC-7 **Lab ID: 266146001** Collected: 06/13/18 09:34 Received: 06/15/18 11:35 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								
Arsenic	**0.0023J**	mg/L	0.0050	0.00057	1	06/20/18 11:50	06/22/18 21:19	7440-38-2	
Barium	**0.038**	mg/L	0.010	0.00078	1	06/20/18 11:50	06/22/18 21:19	7440-39-3	
Boron	**1.8**	mg/L	0.40	0.039	10	06/20/18 11:50	07/02/18 13:36	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/20/18 11:50	06/22/18 21:19	7440-43-9	
Calcium	**151**	mg/L	25.0	0.69	50	06/20/18 11:50	06/22/18 21:25	7440-70-2	
Cobalt	**0.00068J**	mg/L	0.010	0.00052	1	06/20/18 11:50	06/22/18 21:19	7440-48-4	
Lithium	**0.0084J**	mg/L	0.050	0.00097	1	06/20/18 11:50	06/22/18 21:19	7439-93-2	
Molybdenum	**0.013**	mg/L	0.010	0.0019	1	06/20/18 11:50	06/22/18 21:19	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/20/18 11:50	06/22/18 21:19	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**873**	mg/L	25.0	10.0	1		06/18/18 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.8**	mg/L	0.25	0.024	1		06/28/18 06:05	16887-00-6	
Fluoride	**0.25J**	mg/L	0.30	0.029	1		06/28/18 06:05	16984-48-8	
Sulfate	**419**	mg/L	10.0	0.17	10		07/03/18 02:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Sample: BGWC-24 **Lab ID: 266146002** Collected: 06/13/18 11:24 Received: 06/15/18 11:35 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								
Arsenic	**0.0045J**	mg/L	0.0050	0.00057	1	06/20/18 11:50	06/22/18 21:31	7440-38-2	
Barium	**0.10**	mg/L	0.010	0.00078	1	06/20/18 11:50	06/22/18 21:31	7440-39-3	
Boron	**30.1**	mg/L	10.0	0.99	250	06/20/18 11:50	07/02/18 13:42	7440-42-8	
Cadmium	**0.0053**	mg/L	0.0010	0.000093	1	06/20/18 11:50	06/22/18 21:31	7440-43-9	
Calcium	**970**	mg/L	125	3.4	250	06/20/18 11:50	07/02/18 13:42	7440-70-2	
Cobalt	**0.0039J**	mg/L	0.010	0.00052	1	06/20/18 11:50	06/22/18 21:31	7440-48-4	
Lithium	**0.0067J**	mg/L	0.050	0.00097	1	06/20/18 11:50	06/22/18 21:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/20/18 11:50	06/22/18 21:31	7439-98-7	
Thallium	**0.00053J**	mg/L	0.0010	0.00014	1	06/20/18 11:50	06/22/18 21:31	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**4180**	mg/L	25.0	10.0	1		06/18/18 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1880**	mg/L	12.5	1.2	50		07/14/18 07:57	16887-00-6	
Fluoride	**3.1**	mg/L	0.30	0.029	1		06/28/18 06:28	16984-48-8	
Sulfate	**689**	mg/L	20.0	0.34	20		07/13/18 10:23	14808-79-8	H5

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Sample: BGWC-23 **Lab ID: 266146003** Collected: 06/13/18 15:10 Received: 06/15/18 11:35 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								
Arsenic	**0.0019J**	mg/L	0.0050	0.00057	1	06/20/18 11:50	06/22/18 21:42	7440-38-2	
Barium	**0.091**	mg/L	0.010	0.00078	1	06/20/18 11:50	06/22/18 21:42	7440-39-3	
Boron	**8.3**	mg/L	2.0	0.20	50	06/20/18 11:50	07/02/18 13:47	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/20/18 11:50	06/22/18 21:42	7440-43-9	
Calcium	**385**	mg/L	25.0	0.69	50	06/20/18 11:50	06/22/18 21:48	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/20/18 11:50	06/22/18 21:42	7440-48-4	
Lithium	**0.014J**	mg/L	0.050	0.00097	1	06/20/18 11:50	06/22/18 21:42	7439-93-2	
Molybdenum	**0.013**	mg/L	0.010	0.0019	1	06/20/18 11:50	06/22/18 21:42	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/20/18 11:50	06/22/18 21:42	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2020**	mg/L	25.0	10.0	1		06/18/18 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**598**	mg/L	5.0	0.48	20		07/13/18 10:44	16887-00-6	H5
Fluoride	**0.71**	mg/L	0.30	0.029	1		06/28/18 06:50	16984-48-8	
Sulfate	**586**	mg/L	20.0	0.34	20		07/13/18 10:44	14808-79-8	H5

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

QC Batch: 8374 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266146001, 266146002, 266146003

METHOD BLANK: 38651 Matrix: Water
Associated Lab Samples: 266146001, 266146002, 266146003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	06/22/18 17:48	
Barium	mg/L	ND	0.010	0.00078	06/22/18 17:48	
Boron	mg/L	ND	0.040	0.0039	06/22/18 17:48	
Cadmium	mg/L	ND	0.0010	0.000093	06/22/18 17:48	
Calcium	mg/L	ND	0.50	0.014	06/22/18 17:48	
Cobalt	mg/L	ND	0.010	0.00052	06/22/18 17:48	
Lithium	mg/L	ND	0.050	0.00097	06/22/18 17:48	
Molybdenum	mg/L	ND	0.010	0.0019	06/22/18 17:48	
Thallium	mg/L	ND	0.0010	0.00014	06/22/18 17:48	

LABORATORY CONTROL SAMPLE: 38652

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	0.10	102	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	101	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lithium	mg/L	.1	0.11	106	80-120	
Molybdenum	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 38708 38709

Parameter	Units	265864001 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	0.039	.1	.1	0.14	0.14	105	101	75-125	3	20	
Boron	mg/L	0.87	1	1	2.0	1.8	111	88	75-125	12	20	
Cadmium	mg/L	0.00012J	.1	.1	0.10	0.10	104	101	75-125	3	20	
Calcium	mg/L	55.0	1	1	55.4	52.6	44	-235	75-125	5	20	M6
Cobalt	mg/L	ND	.1	.1	0.099	0.098	99	98	75-125	1	20	
Lithium	mg/L	0.00099J	.1	.1	0.10	0.10	104	102	75-125	2	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.099	101	99	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.099	0.098	99	98	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

QC Batch: 8153 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266146001, 266146002, 266146003

LABORATORY CONTROL SAMPLE: 37848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	84-108	

SAMPLE DUPLICATE: 37849

Parameter	Units	266147001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	139	134	4	10	

SAMPLE DUPLICATE: 37850

Parameter	Units	266085012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	228	215	6	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

QC Batch: 8816 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266146001, 266146002, 266146003

METHOD BLANK: 40405 Matrix: Water
Associated Lab Samples: 266146001, 266146002, 266146003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.42	0.25	0.024	06/27/18 18:44	
Fluoride	mg/L	ND	0.30	0.029	06/27/18 18:44	
Sulfate	mg/L	ND	1.0	0.017	06/27/18 18:44	

LABORATORY CONTROL SAMPLE: 40406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.2	92	90-110	
Fluoride	mg/L	10	10.5	105	90-110	
Sulfate	mg/L	10	9.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 40407 40408

Parameter	Units	266085003 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	11.4	11.5	94	95	90-110	1	15	
Fluoride	mg/L	ND	10	10	11.1	11.2	111	112	90-110	1	15	M1
Sulfate	mg/L	1.1	10	10	10.9	11.0	98	99	90-110	1	15	

MATRIX SPIKE SAMPLE: 40409

Parameter	Units	266085006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	17.6	10	25.1	76	90-110	M1
Fluoride	mg/L	ND	10	11.0	110	90-110	
Sulfate	mg/L	8.2	10	17.3	91	90-110	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Sample: BGWC-7 **Lab ID: 266146001** Collected: 06/13/18 09:34 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.23 ± 0.431 (0.350) C:84% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.717 ± 0.459 (0.862) C:68% T:76%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.95 ± 0.890 (1.21)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Sample: BGWC-24 **Lab ID: 266146002** Collected: 06/13/18 11:24 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.25 ± 0.419 (0.338) C:91% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.935 ± 0.441 (0.746) C:79% T:78%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**2.19 ± 0.860 (1.08)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Sample: BGWC-23 **Lab ID: 266146003** Collected: 06/13/18 15:10 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.522 ± 0.297 (0.465) C:95% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.461 ± 0.344 (0.673) C:79% T:85%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.983 ± 0.641 (1.14)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

QC Batch: 302918 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266146001, 266146002, 266146003

METHOD BLANK: 1482114 Matrix: Water
Associated Lab Samples: 266146001, 266146002, 266146003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.185 ± 0.238 (0.509) C:91% T:NA	pCi/L	07/03/18 09:58	

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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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

QC Batch: 302924 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266146001, 266146002, 266146003

METHOD BLANK: 1482129 Matrix: Water
Associated Lab Samples: 266146001, 266146002, 266146003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0380 ± 0.331 (0.764) C:76% T:78%	pCi/L	07/12/18 15:05	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

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-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold 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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 266146

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266146001	**BGWC-7**	EPA 3005A	8374	EPA 6020B	8605
266146002	**BGWC-24**	EPA 3005A	8374	EPA 6020B	8605
266146003	**BGWC-23**	EPA 3005A	8374	EPA 6020B	8605
266146001	**BGWC-7**	EPA 9315	302918		
266146002	**BGWC-24**	EPA 9315	302918		
266146003	**BGWC-23**	EPA 9315	302918		
266146001	**BGWC-7**	EPA 9320	302924		
266146002	**BGWC-24**	EPA 9320	302924		
266146003	**BGWC-23**	EPA 9320	302924		
266146001	**BGWC-7**	Total Radium Calculation	305684		
266146002	**BGWC-24**	Total Radium Calculation	305684		
266146003	**BGWC-23**	Total Radium Calculation	305684		
266146001	**BGWC-7**	SM 2540C	8153		
266146002	**BGWC-24**	SM 2540C	8153		
266146003	**BGWC-23**	SM 2540C	8153		
266146001	**BGWC-7**	EPA 300.0	8816		
266146002	**BGWC-24**	EPA 300.0	8816		
266146003	**BGWC-23**	EPA 300.0	8816		

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:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:		Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Bowen Appendix III	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	317.3

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	Requested Analysis Filtered (Y/N)	Analyses Test	TDS by 2540C	Cl, F, SO4, pH	B,Ca,As,Ba,Cd,Co,Li,Mo,Tl	Radium 226/228	Residual Chlorine (Y/N)
1	BGWC-7	GW	G	6/13/18	0934				5	X		X								1	1	1	2	
2	BGWC-24	GW	G	6/13/18	1124				5	X		X								1	1	1	2	
3	BGWC-23	GW	G	6/13/18	1510				5	X		X								1	1	1	2	
4	BGWC-20	GW	G	6/13/18	1601				5	X		X								1	1	1	2	
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

Residual Chlorine (Y/N)

WO# : 266146

266146

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Audrey Crafton	6/15/18	1005	Mike Nguyen / Pace	6/15/18	1005	
				M Lalman	6/15/18	1125	
							1.5

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	[illegible]		
SIGNATURE of SAMPLER:		DATE Signed:	6/13/18

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	Y	Y

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266146

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

Tracking #:

PM: BM Due Date: 07/16/18

CLIENT: GAPower-CCR

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 1.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/15/18 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: 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, 11 September2006

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 16, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266147001	**BGWA-29**	Water	06/12/18 11:34	06/15/18 11:35
266147002	**BGWC-9**	Water	06/12/18 12:24	06/15/18 11:35
266147003	**BGWA-2**	Water	06/12/18 13:50	06/15/18 11:35
266147004	**BGWC-8**	Water	06/12/18 14:36	06/15/18 11:35
266147005	**BGWC-16**	Water	06/12/18 15:38	06/15/18 11:35
266147006	**Dup-1**	Water	06/12/18 00:00	06/15/18 11:35
266147007	**FBL061218**	Water	06/12/18 15:10	06/15/18 11:35
266147008	**EQBL061218**	Water	06/12/18 15:17	06/15/18 11:35

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266147001	**BGWA-29**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147002	**BGWC-9**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147003	**BGWA-2**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147004	**BGWC-8**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147005	**BGWC-16**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147006	**Dup-1**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147007	**FBL061218**	EPA 6020B	CSW	9	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266147008	**EQBL061218**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWA-29 **Lab ID: 266147001** Collected: 06/12/18 11:34 Received: 06/15/18 11:35 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								
Arsenic	**0.00059J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 19:03	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 18:56	7440-39-3	
Boron	**0.0056J**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 19:03	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 19:03	7440-43-9	
Calcium	**20.3J**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 19:09	7440-70-2	D3
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 19:03	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 19:03	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 18:56	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 19:03	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**139**	mg/L	25.0	10.0	1		06/18/18 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.8**	mg/L	0.25	0.024	1		06/29/18 18:16	16887-00-6	B
Fluoride	**0.053J**	mg/L	0.30	0.029	1		06/29/18 18:16	16984-48-8	
Sulfate	**6.8**	mg/L	1.0	0.017	1		06/29/18 18:16	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 Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWC-9 **Lab ID: 266147002** Collected: 06/12/18 12:24 Received: 06/15/18 11:35 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								
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 19:14	7440-38-2	
Barium	**0.024**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:02	7440-39-3	
Boron	**0.56**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 19:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 19:14	7440-43-9	
Calcium	**53.4**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 19:20	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 19:14	7440-48-4	
Lithium	**0.0012J**	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 19:14	7439-93-2	
Molybdenum	**0.0043J**	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:02	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 19:14	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**348**	mg/L	25.0	10.0	1		06/18/18 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.3**	mg/L	0.25	0.024	1		06/29/18 18:39	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		06/29/18 18:39	16984-48-8	
Sulfate	**80.6**	mg/L	10.0	0.17	10		07/03/18 17:57	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 Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWA-2 **Lab ID: 266147003** Collected: 06/12/18 13:50 Received: 06/15/18 11:35 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								
Arsenic	**0.0013J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 19:26	7440-38-2	
Barium	**0.18**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:07	7440-39-3	
Boron	**0.0058J**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 19:26	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 19:26	7440-43-9	
Calcium	**32.4**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 19:31	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 19:26	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 19:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:07	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 19:26	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**187**	mg/L	25.0	10.0	1		06/18/18 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		06/29/18 19:01	16887-00-6	
Fluoride	**0.086J**	mg/L	0.30	0.029	1		06/29/18 19:01	16984-48-8	
Sulfate	**8.3**	mg/L	1.0	0.017	1		06/29/18 19:01	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 Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWC-8 **Lab ID: 266147004** Collected: 06/12/18 14:36 Received: 06/15/18 11:35 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								
Arsenic	**0.00065J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 19:49	7440-38-2	
Barium	**0.031**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:13	7440-39-3	
Boron	**0.074**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 19:49	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 19:49	7440-43-9	
Calcium	**38.1**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 19:54	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 19:49	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 19:49	7439-93-2	
Molybdenum	**0.0026J**	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:13	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 19:49	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**217**	mg/L	25.0	10.0	1		06/18/18 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.3**	mg/L	0.25	0.024	1		06/29/18 19:24	16887-00-6	B
Fluoride	**0.061J**	mg/L	0.30	0.029	1		06/29/18 19:24	16984-48-8	
Sulfate	**35.2**	mg/L	1.0	0.017	1		06/29/18 19:24	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 Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWC-16 **Lab ID: 266147005** Collected: 06/12/18 15:38 Received: 06/15/18 11:35 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								
Arsenic	**0.00073J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 20:00	7440-38-2	
Barium	**0.029**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:19	7440-39-3	
Boron	**1.3**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 20:00	7440-42-8	
Cadmium	**0.0011**	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 20:00	7440-43-9	
Calcium	**104**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 20:06	7440-70-2	
Cobalt	**0.0048J**	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 20:00	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 20:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:19	7439-98-7	
Thallium	**0.00020J**	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 20:00	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**593**	mg/L	25.0	10.0	1		06/18/18 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**27.2**	mg/L	0.25	0.024	1		06/30/18 15:29	16887-00-6	
Fluoride	**0.061J**	mg/L	0.30	0.029	1		06/30/18 15:29	16984-48-8	
Sulfate	**246**	mg/L	20.0	0.34	20		07/03/18 18:18	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 Bowen Ash Pond
Pace Project No.: 266147

Sample: Dup-1 **Lab ID: 266147006** Collected: 06/12/18 00:00 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 20:11	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:24	7440-39-3	
Boron	**0.0052J**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 20:11	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 20:11	7440-43-9	
Calcium	**20.4J**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 20:17	7440-70-2	D3
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 20:11	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 20:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:24	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 20:11	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**141**	mg/L	25.0	10.0	1		06/18/18 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.9**	mg/L	0.25	0.024	1		06/30/18 15:51	16887-00-6	B
Fluoride	**0.054J**	mg/L	0.30	0.029	1		06/30/18 15:51	16984-48-8	
Sulfate	**6.7**	mg/L	1.0	0.017	1		06/30/18 15:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: FBL061218 **Lab ID: 266147007** Collected: 06/12/18 15:10 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 20:23	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:30	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 20:23	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 20:23	7440-43-9	
Calcium	**0.014J**	mg/L	0.50	0.014	1	06/21/18 13:04	07/10/18 20:23	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 20:23	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 20:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:30	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 20:23	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**20.0J**	mg/L	25.0	10.0	1		06/18/18 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.32**	mg/L	0.25	0.024	1		06/30/18 16:14	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		06/30/18 16:14	16984-48-8	
Sulfate	**0.11J**	mg/L	1.0	0.017	1		06/30/18 16:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: EQBL061218 **Lab ID: 266147008** Collected: 06/12/18 15:17 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 20:29	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:36	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 20:29	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 20:29	7440-43-9	
Calcium	**0.023J**	mg/L	0.50	0.014	1	06/21/18 13:04	07/10/18 20:29	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 20:29	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 20:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:36	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 20:29	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**20.0J**	mg/L	25.0	10.0	1		06/18/18 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.32**	mg/L	0.25	0.024	1		06/30/18 16:37	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		06/30/18 16:37	16984-48-8	
Sulfate	**0.12J**	mg/L	1.0	0.017	1		06/30/18 16:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

QC Batch: 8493 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

METHOD BLANK: 39082 Matrix: Water
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	07/10/18 15:57	
Barium	mg/L	ND	0.010	0.00078	07/10/18 15:57	
Boron	mg/L	ND	0.040	0.0039	07/10/18 15:57	
Cadmium	mg/L	ND	0.0010	0.000093	07/10/18 15:57	
Calcium	mg/L	ND	0.50	0.014	07/10/18 15:57	
Cobalt	mg/L	ND	0.010	0.00052	07/10/18 15:57	
Lithium	mg/L	ND	0.050	0.00097	07/10/18 15:57	
Molybdenum	mg/L	ND	0.010	0.0019	07/10/18 15:57	
Thallium	mg/L	ND	0.0010	0.00014	07/10/18 15:57	

LABORATORY CONTROL SAMPLE: 39083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.11	105	80-120	
Barium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.1	113	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.0	104	80-120	
Cobalt	mg/L	.1	0.11	106	80-120	
Lithium	mg/L	.1	0.11	113	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Thallium	mg/L	.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39185 39186

Parameter	Units	266089010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.00066J	.1	.1	0.10	0.099	103	99	75-125	5	20	
Barium	mg/L	0.046	.1	.1	0.15	0.16	107	109	75-125	1	20	
Boron	mg/L	0.25	1	1	1.2	1.2	91	93	75-125	2	20	
Cadmium	mg/L	0.00019J	.1	.1	0.10	0.099	105	98	75-125	6	20	
Calcium	mg/L	18.7J	1	1	18.7J	17.5J	2	-112	75-125	6	20	M6
Cobalt	mg/L	ND	.1	.1	0.10	0.099	103	99	75-125	4	20	
Lithium	mg/L	0.0065J	.1	.1	0.10	0.10	96	95	75-125	0	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	99	101	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.10	0.094	100	94	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

QC Batch: 8153 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

LABORATORY CONTROL SAMPLE: 37848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	84-108	

SAMPLE DUPLICATE: 37849

Parameter	Units	266147001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	139	134	4	10	

SAMPLE DUPLICATE: 37850

Parameter	Units	266085012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	228	215	6	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

QC Batch: 8908 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

METHOD BLANK: 40829 Matrix: Water
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWA-29 **Lab ID: 266147001** Collected: 06/12/18 11:34 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.373 ± 0.252 (0.414) C:89% T:NA**	pCi/L	07/03/18 10:41	13982-63-3	
Radium-228	EPA 9320	**0.143 ± 0.322 (0.714) C:77% T:82%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.516 ± 0.574 (1.13)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWC-9 **Lab ID: 266147002** Collected: 06/12/18 12:24 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.319 ± 0.208 (0.302) C:94% T:NA**	pCi/L	07/03/18 09:57	13982-63-3	
Radium-228	EPA 9320	**-0.148 ± 0.367 (0.884) C:73% T:79%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.319 ± 0.575 (1.19)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWA-2 **Lab ID: 266147003** Collected: 06/12/18 13:50 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.456 ± 0.268 (0.410) C:100% T:NA**	pCi/L	07/03/18 10:04	13982-63-3	
Radium-228	EPA 9320	**0.489 ± 0.408 (0.817) C:75% T:75%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.945 ± 0.676 (1.23)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWC-8 **Lab ID: 266147004** Collected: 06/12/18 14:36 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.310 ± 0.224 (0.361) C:91% T:NA**	pCi/L	07/03/18 09:57	13982-63-3	
Radium-228	EPA 9320	**0.184 ± 0.326 (0.713) C:75% T:74%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.494 ± 0.550 (1.07)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: BGWC-16 **Lab ID: 266147005** Collected: 06/12/18 15:38 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.253 ± 0.205 (0.346) C:94% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.479 ± 0.442 (0.906) C:76% T:77%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.732 ± 0.647 (1.25)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: Dup-1 **Lab ID: 266147006** Collected: 06/12/18 00:00 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.158 ± 0.167 (0.313) C:93% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.00730 ± 0.330 (0.770) C:80% T:72%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.165 ± 0.497 (1.08)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: FBL061218 **Lab ID: 266147007** Collected: 06/12/18 15:10 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.169 ± 0.175 (0.333) C:94% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**-0.504 ± 0.325 (0.845) C:75% T:80%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.169 ± 0.500 (1.18)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

Sample: EQBL061218 **Lab ID: 266147008** Collected: 06/12/18 15:17 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.119 ± 0.164 (0.343) C:91% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.544 ± 0.418 (0.817) C:76% T:67%**	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.663 ± 0.582 (1.16)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

QC Batch: 302918 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266147005, 266147006, 266147007, 266147008

METHOD BLANK: 1482114 Matrix: Water
Associated Lab Samples: 266147005, 266147006, 266147007, 266147008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.185 ± 0.238 (0.509) C:91% T:NA	pCi/L	07/03/18 09:58	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

QC Batch: 302924 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

METHOD BLANK: 1482129 Matrix: Water
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004, 266147005, 266147006, 266147007, 266147008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0380 ± 0.331 (0.764) C:76% T:78%	pCi/L	07/12/18 15:05	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

QC Batch: 302917 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004

METHOD BLANK: 1482111 Matrix: Water
Associated Lab Samples: 266147001, 266147002, 266147003, 266147004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.338 ± 0.240 (0.382) C:97% T:NA	pCi/L	07/03/18 08:19	

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

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 266147

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-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

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.
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 Bowen Ash Pond
Pace Project No.: 266147

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266147001	**BGWA-29**	EPA 3005A	8493	EPA 6020B	9534
266147002	**BGWC-9**	EPA 3005A	8493	EPA 6020B	9534
266147003	**BGWA-2**	EPA 3005A	8493	EPA 6020B	9534
266147004	**BGWC-8**	EPA 3005A	8493	EPA 6020B	9534
266147005	**BGWC-16**	EPA 3005A	8493	EPA 6020B	9534
266147006	**Dup-1**	EPA 3005A	8493	EPA 6020B	9534
266147007	**FBL061218**	EPA 3005A	8493	EPA 6020B	9534
266147008	**EQBL061218**	EPA 3005A	8493	EPA 6020B	9534
266147001	**BGWA-29**	EPA 9315	302917		
266147002	**BGWC-9**	EPA 9315	302917		
266147003	**BGWA-2**	EPA 9315	302917		
266147004	**BGWC-8**	EPA 9315	302917		
266147005	**BGWC-16**	EPA 9315	302918		
266147006	**Dup-1**	EPA 9315	302918		
266147007	**FBL061218**	EPA 9315	302918		
266147008	**EQBL061218**	EPA 9315	302918		
266147001	**BGWA-29**	EPA 9320	302924		
266147002	**BGWC-9**	EPA 9320	302924		
266147003	**BGWA-2**	EPA 9320	302924		
266147004	**BGWC-8**	EPA 9320	302924		
266147005	**BGWC-16**	EPA 9320	302924		
266147006	**Dup-1**	EPA 9320	302924		
266147007	**FBL061218**	EPA 9320	302924		
266147008	**EQBL061218**	EPA 9320	302924		
266147001	**BGWA-29**	Total Radium Calculation	305684		
266147002	**BGWC-9**	Total Radium Calculation	305684		
266147003	**BGWA-2**	Total Radium Calculation	305684		
266147004	**BGWC-8**	Total Radium Calculation	305684		
266147005	**BGWC-16**	Total Radium Calculation	305684		
266147006	**Dup-1**	Total Radium Calculation	305684		
266147007	**FBL061218**	Total Radium Calculation	305684		
266147008	**EQBL061218**	Total Radium Calculation	305684		
266147001	**BGWA-29**	SM 2540C	8153		
266147002	**BGWC-9**	SM 2540C	8153		
266147003	**BGWA-2**	SM 2540C	8153		
266147004	**BGWC-8**	SM 2540C	8153		
266147005	**BGWC-16**	SM 2540C	8153		
266147006	**Dup-1**	SM 2540C	8153		
266147007	**FBL061218**	SM 2540C	8153		
266147008	**EQBL061218**	SM 2540C	8153		
266147001	**BGWA-29**	EPA 300.0	8908		
266147002	**BGWC-9**	EPA 300.0	8908		
266147003	**BGWA-2**	EPA 300.0	8908		
266147004	**BGWC-8**	EPA 300.0	8908		
266147005	**BGWC-16**	EPA 300.0	8908		
266147006	**Dup-1**	EPA 300.0	8908		

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 Bowen Ash Pond
Pace Project No.: 266147

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266147007	**FBL061218**	EPA 300.0	8908		
266147008	**EQBL061218**	EPA 300.0	8908		

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:

Company:	Georgia Power - Coal Combustion Residuals
Address:	2480 Maner Road
	Atlanta, GA 30339
Email:	jabraham@southernco.com
Phone:	(404)506-7239 Fax:
Requested Due Date:	

Section B — Required Project Information:

Report To:	Joju Abraham
Copy To:	
Purchase Order #:	SCS10348606
Project Name:	Plant Bowen Appendix III
Project #:	

Section C — Invoice Information:

Attention:	scsinvoices@southernco.com
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Pace Profile #:	317.3

Regulatory Agency: —

State / Location: GA

Requested Analysis Filtered (Y/N)

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	TDS by 2540C	Cl, F, SO4, pH	B,Ca,As,Ba,Cd,Co,Li,Mo,Tl	Radium 226/228	Residual Chlorine (Y/N)
1	BGWA-29	WT	G	6/12/18	1134				7	X		X							1	1	1	4		
2	BGWC-9	WT	G	6/12/18	1224				5	X		X							1	1	1	2		
3	BGWA-2	WT	G	6/12/18	1350				5	X		X							1	1	1	2		
4	BGWC-8	WT	G	6/12/18	1436				5	X		X							1	1	1	2		
5	BGWC-6	WT	G	6/12/18	1538				5	X		X							1	1	1	2		
6	DUP-1	WT	G	6/12/18	—				5	X		X							1	1	1	2		
7	FBLK061218	WT	G	6/12/18	1510				5	X		X							1	1	1	2		
8	EBLK061218	WT	G	6/12/18	1517				5	X		X							1	1	1	2		
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO#: 266147

266147

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Audrey Crafton	6/15/18	1005	Mike Nguyen / Pace	6/15/18	1005
				MRahman	6/15/18	1135

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: [illegible]

SIGNATURE of SAMPLER: [signature]

DATE Signed: 6/12/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266147

PM: BM **Due Date: 07/16/18**

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 1.5 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/15/18 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:	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

July 17, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266149001	**BGWC-22**	Water	06/14/18 10:04	06/15/18 11:35
266149002	**BGWC-12**	Water	06/14/18 11:28	06/15/18 11:35
266149003	**BGWC-10**	Water	06/14/18 11:45	06/15/18 11:35
266149004	**BGWC-21**	Water	06/14/18 12:56	06/15/18 11:35
266149005	**BGWC-17**	Water	06/14/18 14:36	06/15/18 11:35
266149006	**BGWC-18**	Water	06/14/18 14:52	06/15/18 11:35
266149007	**BGWC-25**	Water	06/14/18 15:26	06/15/18 11:35
266149008	**FBL061418**	Water	06/14/18 15:48	06/15/18 11:35
266149009	**EQBL061418**	Water	06/14/18 16:00	06/15/18 11:35
266149010	**Dup-2**	Water	06/14/18 00:00	06/15/18 11:35

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266149001	**BGWC-22**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB, RLC	3	PASI-GA
266149002	**BGWC-12**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB, RLC	3	PASI-GA
266149003	**BGWC-10**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB, RLC	3	PASI-GA
266149004	**BGWC-21**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
266149005	**BGWC-17**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB, RLC	3	PASI-GA
266149006	**BGWC-18**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB, RLC	3	PASI-GA
266149007	**BGWC-25**	EPA 6020B	CSW	9	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
266149008	**FBL061418**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
266149009	**EQBL061418**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
266149010	**Dup-2**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-22 **Lab ID: 266149001** Collected: 06/14/18 10:04 Received: 06/15/18 11:35 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								
Arsenic	**0.0027J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 20:34	7440-38-2	
Barium	**0.093**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/11/18 19:53	7440-39-3	
Boron	**11.0**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/11/18 19:53	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 20:34	7440-43-9	
Calcium	**482**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 20:40	7440-70-2	
Cobalt	**0.017**	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 20:34	7440-48-4	
Lithium	**0.024J**	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 20:34	7439-93-2	
Molybdenum	**0.059**	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:53	7439-98-7	
Thallium	**0.00069J**	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 20:34	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2380**	mg/L	25.0	10.0	1		06/19/18 10:25		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**725**	mg/L	5.0	0.48	20		07/11/18 16:35	16887-00-6	
Fluoride	**0.15J**	mg/L	0.30	0.029	1		07/07/18 09:47	16984-48-8	
Sulfate	**738**	mg/L	20.0	0.34	20		07/11/18 16:35	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 Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-12 **Lab ID: 266149002** Collected: 06/14/18 11:28 Received: 06/15/18 11:35 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								
Arsenic	**0.00096J**	mg/L	0.0050	0.00057	1	06/21/18 13:04	07/10/18 20:57	7440-38-2	
Barium	**0.032**	mg/L	0.010	0.00078	1	06/21/18 13:04	07/10/18 20:57	7440-39-3	
Boron	**1.0**	mg/L	0.040	0.0039	1	06/21/18 13:04	07/10/18 20:57	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/21/18 13:04	07/10/18 20:57	7440-43-9	
Calcium	**109**	mg/L	25.0	0.69	50	06/21/18 13:04	07/10/18 21:03	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/21/18 13:04	07/10/18 20:57	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/21/18 13:04	07/10/18 20:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/21/18 13:04	07/11/18 19:59	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/21/18 13:04	07/10/18 20:57	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**684**	mg/L	25.0	10.0	1		06/19/18 10:25		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**30.5**	mg/L	0.25	0.024	1		07/07/18 10:09	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/07/18 10:09	16984-48-8	
Sulfate	**275**	mg/L	20.0	0.34	20		07/14/18 07:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-10 **Lab ID: 266149003** Collected: 06/14/18 11:45 Received: 06/15/18 11:35 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								
Arsenic	**0.0075**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 16:10	7440-38-2	
Barium	**0.053**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 16:10	7440-39-3	
Boron	**0.54**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 16:10	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 16:10	7440-43-9	
Calcium	**58.4**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 16:16	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 16:10	7440-48-4	
Lithium	**0.0011J**	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 16:10	7439-93-2	
Molybdenum	**0.0033J**	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 16:10	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 16:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**362**	mg/L	25.0	10.0	1		06/19/18 10:25		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.1**	mg/L	0.25	0.024	1		07/07/18 10:30	16887-00-6	
Fluoride	**0.046J**	mg/L	0.30	0.029	1		07/07/18 10:30	16984-48-8	
Sulfate	**110**	mg/L	5.0	0.085	5		07/11/18 17:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-21 **Lab ID: 266149004** Collected: 06/14/18 12:56 Received: 06/15/18 11:35 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								
Arsenic	**0.00087J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 16:22	7440-38-2	
Barium	**0.042**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 16:22	7440-39-3	
Boron	**0.035J**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 16:22	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 16:22	7440-43-9	
Calcium	**39.4**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 16:28	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 16:22	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 16:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 16:22	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 16:22	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**231**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	0.25	0.024	1		07/07/18 10:52	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/07/18 10:52	16984-48-8	
Sulfate	**48.1**	mg/L	1.0	0.017	1		07/07/18 10:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-17 **Lab ID: 266149005** Collected: 06/14/18 14:36 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 16:33	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 16:33	7440-39-3	
Boron	**1.4**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 16:33	7440-42-8	
Cadmium	**0.00015J**	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 16:33	7440-43-9	
Calcium	**65.7**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 16:39	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 16:33	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 16:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 16:33	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 16:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**395**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**33.3**	mg/L	0.25	0.024	1		07/07/18 11:14	16887-00-6	
Fluoride	**0.11J**	mg/L	0.30	0.029	1		07/07/18 11:14	16984-48-8	
Sulfate	**106**	mg/L	5.0	0.085	5		07/11/18 17:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-18 **Lab ID: 266149006** Collected: 06/14/18 14:52 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 17:02	7440-38-2	
Barium	**0.032**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 17:02	7440-39-3	
Boron	**0.75**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 17:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 17:02	7440-43-9	
Calcium	**53.1**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 17:08	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 17:02	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 17:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 17:02	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 17:02	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**290**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.3**	mg/L	0.25	0.024	1		07/07/18 11:36	16887-00-6	
Fluoride	**0.095J**	mg/L	0.30	0.029	1		07/07/18 11:36	16984-48-8	
Sulfate	**74.6**	mg/L	2.0	0.034	2		07/11/18 18:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-25 **Lab ID: 266149007** Collected: 06/14/18 15:26 Received: 06/15/18 11:35 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								
Arsenic	**0.0022J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 17:14	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 17:14	7440-39-3	
Boron	**0.017J**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 17:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 17:14	7440-43-9	
Calcium	**44.8**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 17:19	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 17:14	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 17:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 17:14	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 17:14	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**225**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		07/07/18 13:25	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/07/18 13:25	16984-48-8	
Sulfate	**10**	mg/L	1.0	0.017	1		07/07/18 13:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: FBL061418 **Lab ID: 266149008** Collected: 06/14/18 15:48 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 17:25	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 17:25	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 17:25	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 17:25	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	06/25/18 12:50	06/27/18 17:25	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 17:25	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 17:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 17:25	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 17:25	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**19.0J**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.36**	mg/L	0.25	0.024	1		07/07/18 13:46	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/07/18 13:46	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/07/18 13:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: EQBL061418 **Lab ID: 266149009** Collected: 06/14/18 16:00 Received: 06/15/18 11:35 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 17:31	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 17:31	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 17:31	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 17:31	7440-43-9	
Calcium	**0.047J**	mg/L	0.50	0.014	1	06/25/18 12:50	06/27/18 17:31	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 17:31	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 17:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 17:31	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 17:31	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**13.0J**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.44**	mg/L	0.25	0.024	1		07/07/18 14:08	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/07/18 14:08	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/07/18 14:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: Dup-2 **Lab ID: 266149010** Collected: 06/14/18 00:00 Received: 06/15/18 11:35 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								
Arsenic	**0.0028J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 17:37	7440-38-2	
Barium	**0.094**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 17:37	7440-39-3	
Boron	**14.7**	mg/L	2.0	0.20	50	06/25/18 12:50	06/27/18 17:42	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 17:37	7440-43-9	
Calcium	**534**	mg/L	125	3.4	250	06/25/18 12:50	06/28/18 15:21	7440-70-2	
Cobalt	**0.018**	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 17:37	7440-48-4	
Lithium	**0.024J**	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 17:37	7439-93-2	
Molybdenum	**0.061**	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 17:37	7439-98-7	
Thallium	**0.00076J**	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 17:37	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2400**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**731**	mg/L	6.2	0.60	25		07/15/18 16:27	16887-00-6	H5
Fluoride	**0.19J**	mg/L	0.30	0.029	1		07/06/18 23:17	16984-48-8	
Sulfate	**758**	mg/L	25.0	0.42	25		07/15/18 16:27	14808-79-8	H5

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 8493 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266149001, 266149002

METHOD BLANK: 39082 Matrix: Water
Associated Lab Samples: 266149001, 266149002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	07/10/18 15:57	
Barium	mg/L	ND	0.010	0.00078	07/10/18 15:57	
Boron	mg/L	ND	0.040	0.0039	07/10/18 15:57	
Cadmium	mg/L	ND	0.0010	0.000093	07/10/18 15:57	
Calcium	mg/L	ND	0.50	0.014	07/10/18 15:57	
Cobalt	mg/L	ND	0.010	0.00052	07/10/18 15:57	
Lithium	mg/L	ND	0.050	0.00097	07/10/18 15:57	
Molybdenum	mg/L	ND	0.010	0.0019	07/10/18 15:57	
Thallium	mg/L	ND	0.0010	0.00014	07/10/18 15:57	

LABORATORY CONTROL SAMPLE: 39083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.11	105	80-120	
Barium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.1	113	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.0	104	80-120	
Cobalt	mg/L	.1	0.11	106	80-120	
Lithium	mg/L	.1	0.11	113	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Thallium	mg/L	.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39185 39186

Parameter	Units	266089010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.00066J	.1	.1	0.10	0.099	103	99	75-125	5	20	
Barium	mg/L	0.046	.1	.1	0.15	0.16	107	109	75-125	1	20	
Boron	mg/L	0.25	1	1	1.2	1.2	91	93	75-125	2	20	
Cadmium	mg/L	0.00019J	.1	.1	0.10	0.099	105	98	75-125	6	20	
Calcium	mg/L	18.7J	1	1	18.7J	17.5J	2	-112	75-125	6	20	M6
Cobalt	mg/L	ND	.1	.1	0.10	0.099	103	99	75-125	4	20	
Lithium	mg/L	0.0065J	.1	.1	0.10	0.10	96	95	75-125	0	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	99	101	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.10	0.094	100	94	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 8657 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009, 266149010

METHOD BLANK: 39888 Matrix: Water
Associated Lab Samples: 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009, 266149010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	06/27/18 15:47	
Barium	mg/L	ND	0.010	0.00078	06/27/18 15:47	
Boron	mg/L	ND	0.040	0.0039	06/27/18 15:47	
Cadmium	mg/L	ND	0.0010	0.000093	06/27/18 15:47	
Calcium	mg/L	ND	0.50	0.014	06/27/18 15:47	
Cobalt	mg/L	ND	0.010	0.00052	06/27/18 15:47	
Lithium	mg/L	ND	0.050	0.00097	06/27/18 15:47	
Molybdenum	mg/L	ND	0.010	0.0019	06/27/18 15:47	
Thallium	mg/L	ND	0.0010	0.00014	06/27/18 15:47	

LABORATORY CONTROL SAMPLE: 39889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.095	95	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.11	111	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39890 39891

Parameter	Units	266151001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0015J	.1	.1	0.11	0.11	108	108	75-125	1	20	
Barium	mg/L	0.031	.1	.1	0.13	0.13	100	99	75-125	1	20	
Boron	mg/L	3.6	1	1	4.5	4.5	93	89	75-125	1	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	1	20	
Calcium	mg/L	234	1	1	227	224	-703	-958	75-125	1	20	M6
Cobalt	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	0	20	
Lithium	mg/L	0.020J	.1	.1	0.12	0.13	104	106	75-125	1	20	
Molybdenum	mg/L	0.016	.1	.1	0.12	0.12	105	105	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.097	0.099	97	99	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 8184 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009, 266149010

LABORATORY CONTROL SAMPLE: 37930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	84-108	

SAMPLE DUPLICATE: 37931

Parameter	Units	266151001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1060	1110	5	10	

SAMPLE DUPLICATE: 37932

Parameter	Units	266149010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2400	2290	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 9362 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009

METHOD BLANK: 42594 Matrix: Water
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.41	0.25	0.024	07/07/18 02:32	
Fluoride	mg/L	ND	0.30	0.029	07/07/18 02:32	
Sulfate	mg/L	ND	1.0	0.017	07/07/18 02:32	

LABORATORY CONTROL SAMPLE: 42595

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE SAMPLE: 42598

Parameter	Units	266701006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4010	10	768	-32500	90-110	E
Fluoride	mg/L	0.12J	10	9.3	92	90-110	
Sulfate	mg/L	741	10	355	-3860	90-110	E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 42596 42597

Parameter	Units	266698001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1910	10	10	108	318	-18000	-15900	90-110	98	15	E,M1, R2
Fluoride	mg/L	0.12J	10	10	10.2	10.2	100	101	90-110	1	15	
Sulfate	mg/L	352	10	10	222	222	-1290	-1290	90-110	0	15	E,M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 9363
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266149010

METHOD BLANK: 42599
Matrix: Water
Associated Lab Samples: 266149010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.29	0.25	0.024	07/06/18 22:34	
Fluoride	mg/L	ND	0.30	0.029	07/06/18 22:34	
Sulfate	mg/L	ND	1.0	0.017	07/06/18 22:34	

LABORATORY CONTROL SAMPLE: 42600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 42601 42602

Parameter	Units	266151003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	390	10	10	130	129	-2600	-2600	90-110	1	15	E,M1
Fluoride	mg/L	0.51	10	10	9.9	10	94	95	90-110	1	15	
Sulfate	mg/L	174	10	10	140	140	-342	-342	90-110	0	15	E,M1

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-22 **Lab ID: 266149001** Collected: 06/14/18 10:04 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.13 ± 0.400 (0.357) C:95% T:NA**	pCi/L	07/03/18 11:31	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.481 (0.833) C:75% T:81%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**2.14 ± 0.881 (1.19)**	pCi/L	07/16/18 13:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-12 **Lab ID: 266149002** Collected: 06/14/18 11:28 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.146 ± 0.200 (0.429) C:93% T:NA**	pCi/L	07/03/18 11:52	13982-63-3	
Radium-228	EPA 9320	**0.170 ± 0.368 (0.816) C:73% T:82%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.316 ± 0.568 (1.25)**	pCi/L	07/16/18 13:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-10 **Lab ID: 266149003** Collected: 06/14/18 11:45 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.642 ± 0.311 (0.397) C:88% T:NA**	pCi/L	07/03/18 11:52	13982-63-3	
Radium-228	EPA 9320	**0.580 ± 0.436 (0.855) C:72% T:77%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 0.747 (1.25)**	pCi/L	07/16/18 13:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-21 **Lab ID: 266149004** Collected: 06/14/18 12:56 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.583 ± 0.304 (0.393) C:89% T:NA**	pCi/L	07/03/18 11:52	13982-63-3	
Radium-228	EPA 9320	**-0.121 ± 0.522 (1.22) C:70% T:73%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.583 ± 0.826 (1.61)**	pCi/L	07/16/18 13:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-17 **Lab ID: 266149005** Collected: 06/14/18 14:36 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.113 ± 0.172 (0.375) C:86% T:NA**	pCi/L	07/03/18 11:32	13982-63-3	
Radium-228	EPA 9320	**0.525 ± 0.443 (0.887) C:71% T:76%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.638 ± 0.615 (1.26)**	pCi/L	07/16/18 13:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-18 **Lab ID: 266149006** Collected: 06/14/18 14:52 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.300 ± 0.241 (0.428) C:86% T:NA**	pCi/L	07/03/18 11:32	13982-63-3	
Radium-228	EPA 9320	**0.689 ± 0.409 (0.751) C:74% T:81%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.989 ± 0.650 (1.18)**	pCi/L	07/16/18 13:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: BGWC-25 **Lab ID: 266149007** Collected: 06/14/18 15:26 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.244 ± 0.244 (0.478) C:85% T:NA**	pCi/L	07/03/18 11:32	13982-63-3	
Radium-228	EPA 9320	**0.477 ± 0.424 (0.862) C:74% T:80%**	pCi/L	07/13/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.721 ± 0.668 (1.34)**	pCi/L	07/16/18 13:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: FBL061418 **Lab ID: 266149008** Collected: 06/14/18 15:48 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.143 ± 0.196 (0.416) C:80% T:NA**	pCi/L	07/03/18 11:32	13982-63-3	
Radium-228	EPA 9320	**0.199 ± 0.375 (0.823) C:73% T:76%**	pCi/L	07/13/18 11:17	15262-20-1	
Total Radium	Total Radium Calculation	**0.342 ± 0.571 (1.24)**	pCi/L	07/16/18 13:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: EQBL061418 **Lab ID: 266149009** Collected: 06/14/18 16:00 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0243 ± 0.163 (0.420) C:96% T:NA**	pCi/L	07/03/18 11:52	13982-63-3	
Radium-228	EPA 9320	**0.167 ± 0.296 (0.648) C:72% T:84%**	pCi/L	07/13/18 11:17	15262-20-1	
Total Radium	Total Radium Calculation	**0.191 ± 0.459 (1.07)**	pCi/L	07/16/18 13:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Sample: Dup-2 **Lab ID: 266149010** Collected: 06/14/18 00:00 Received: 06/15/18 11:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.24 ± 0.347 (0.218) C:91% T:NA**	pCi/L	07/02/18 09:02	13982-63-3	
Radium-228	EPA 9320	**0.953 ± 0.552 (1.03) C:69% T:75%**	pCi/L	07/13/18 11:17	15262-20-1	
Total Radium	Total Radium Calculation	**2.19 ± 0.899 (1.25)**	pCi/L	07/16/18 13:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 302918 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009

METHOD BLANK: 1482114 Matrix: Water
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.185 ± 0.238 (0.509) C:91% T:NA	pCi/L	07/03/18 09:58	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 303816 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266149010

METHOD BLANK: 1486463 Matrix: Water
Associated Lab Samples: 266149010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0950 ± 0.112 (0.224) C:97% T:NA	pCi/L	07/02/18 08:24	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

QC Batch: 303690 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009, 266149010

METHOD BLANK: 1486126 Matrix: Water
Associated Lab Samples: 266149001, 266149002, 266149003, 266149004, 266149005, 266149006, 266149007, 266149008, 266149009, 266149010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.00138 ± 0.309 (0.721) C:75% T:84%	pCi/L	07/13/18 11:16	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

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-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.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold 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.
R2	RPD value was outside control limits due to matrix interference

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266149001	BGWC-22	EPA 3005A	8493	EPA 6020B	9534
266149002	BGWC-12	EPA 3005A	8493	EPA 6020B	9534
266149003	BGWC-10	EPA 3005A	8657	EPA 6020B	8854
266149004	BGWC-21	EPA 3005A	8657	EPA 6020B	8854
266149005	BGWC-17	EPA 3005A	8657	EPA 6020B	8854
266149006	BGWC-18	EPA 3005A	8657	EPA 6020B	8854
266149007	BGWC-25	EPA 3005A	8657	EPA 6020B	8854
266149008	FBL061418	EPA 3005A	8657	EPA 6020B	8854
266149009	EQBL061418	EPA 3005A	8657	EPA 6020B	8854
266149010	Dup-2	EPA 3005A	8657	EPA 6020B	8854
266149001	BGWC-22	EPA 9315	302918		
266149002	BGWC-12	EPA 9315	302918		
266149003	BGWC-10	EPA 9315	302918		
266149004	BGWC-21	EPA 9315	302918		
266149005	BGWC-17	EPA 9315	302918		
266149006	BGWC-18	EPA 9315	302918		
266149007	BGWC-25	EPA 9315	302918		
266149008	FBL061418	EPA 9315	302918		
266149009	EQBL061418	EPA 9315	302918		
266149010	Dup-2	EPA 9315	303816		
266149001	BGWC-22	EPA 9320	303690		
266149002	BGWC-12	EPA 9320	303690		
266149003	BGWC-10	EPA 9320	303690		
266149004	BGWC-21	EPA 9320	303690		
266149005	BGWC-17	EPA 9320	303690		
266149006	BGWC-18	EPA 9320	303690		
266149007	BGWC-25	EPA 9320	303690		
266149008	FBL061418	EPA 9320	303690		
266149009	EQBL061418	EPA 9320	303690		
266149010	Dup-2	EPA 9320	303690		
266149001	BGWC-22	Total Radium Calculation	305946		
266149002	BGWC-12	Total Radium Calculation	305946		
266149003	BGWC-10	Total Radium Calculation	305946		
266149004	BGWC-21	Total Radium Calculation	305946		
266149005	BGWC-17	Total Radium Calculation	305946		
266149006	BGWC-18	Total Radium Calculation	305946		
266149007	BGWC-25	Total Radium Calculation	305946		
266149008	FBL061418	Total Radium Calculation	305946		
266149009	EQBL061418	Total Radium Calculation	305946		
266149010	Dup-2	Total Radium Calculation	305946		
266149001	BGWC-22	SM 2540C	8184		
266149002	BGWC-12	SM 2540C	8184		
266149003	BGWC-10	SM 2540C	8184		
266149004	BGWC-21	SM 2540C	8184		
266149005	BGWC-17	SM 2540C	8184		
266149006	BGWC-18	SM 2540C	8184		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 266149

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266149007	**BGWC-25**	SM 2540C	8184		
266149008	**FBL061418**	SM 2540C	8184		
266149009	**EQBL061418**	SM 2540C	8184		
266149010	**Dup-2**	SM 2540C	8184		
266149001	**BGWC-22**	EPA 300.0	9362		
266149002	**BGWC-12**	EPA 300.0	9362		
266149003	**BGWC-10**	EPA 300.0	9362		
266149004	**BGWC-21**	EPA 300.0	9362		
266149005	**BGWC-17**	EPA 300.0	9362		
266149006	**BGWC-18**	EPA 300.0	9362		
266149007	**BGWC-25**	EPA 300.0	9362		
266149008	**FBL061418**	EPA 300.0	9362		
266149009	**EQBL061418**	EPA 300.0	9362		
266149010	**Dup-2**	EPA 300.0	9363		

CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Georgia Power - Coal Combustion Residuals
Address:	2480 Maner Road
	Atlanta, GA 30339
Email:	jabraham@southernco.com
Phone:	(404)506-7239 Fax
Requested Due Date:	

Section B — Required Project Information:

Report To:	Joju Abraham
Copy To:	
Purchase Order #:	SCS10348606
Project Name:	Plant Bowen Appendix III
Project #:	

Section C — Invoice Information:

Attention:	scsinvoices@southernco.com
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Pace Profile #:	317.3

Regulatory Agency:

State / Location: GA

Requested Analysis Filtered (Y/N)

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS by 2540C	CL, F, SO4, pH	B,Ca,As,Ba,Cd,Co,Li,Mo,Tl	Radium 226/228	Residual Chlorine (Y/N)
1	BGWC-22	WT	G	6/14/18	1004				7	X		X							1	1	1	4	
2	BGWC-12	WT	G	6/14/18	1128				5	X		X							1	1	1	2	
3	BGWC-10	WT	G	6/14/18	1145				5	X		X							1	1	1	2	
4	BGWC-21	WT	G	6/14/18	1256				5	X		X							1	1	1	2	
5	BGWC-17	WT	G	6/14/18	1436				5	X		X							1	1	1	2	
6	BGWC-18	WT	G	6/14/18	1452				5	X		X							1	1	1	2	
7	BGWC-25	WT	G	6/14/18	1526				5	X		X							1	1	1	2	
8	FBLK61418	WT	G	6/14/18	1548				5	X		X							1	1	1	2	
9	EQBLK61418	WT	G	6/14/18	1600				5	X		X							1	1	1	2	
10	DUP-2	WT	G	6/14/18	-				5	X		X							1	1	1	2	
11																							
12																							

WO#: 266149

266149

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Audrey Crafton	6/15/18	1005	Mike Nguyen/Pace	6/15/18	1005
				M Lalman	6/15/18	1135

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin [illegible], Robert Muth, Veronica Fox

SIGNATURE of SAMPLER: [signature]

DATE Signed: 6/14/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266149

PM: BM Due Date: 07/16/18

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: 1.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/15/18 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)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 16, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266151001	**BGWC-20**	Water	06/13/18 16:01	06/15/18 14:30
266151002	**BGWC-14**	Water	06/15/18 09:16	06/15/18 14:30
266151003	**BGWC-30**	Water	06/15/18 10:06	06/15/18 14:30
266151004	**BGWC-19**	Water	06/15/18 10:32	06/15/18 14:30

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266151001	**BGWC-20**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	MWB, RLC	3	PASI-GA
266151002	**BGWC-14**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266151003	**BGWC-30**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA
266151004	**BGWC-19**	EPA 6020B	CSW	9	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	JPT	1	PASI-GA
		EPA 300.0	RLC	3	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-20 **Lab ID: 266151001** Collected: 06/13/18 16:01 Received: 06/15/18 14:30 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								
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 17:48	7440-38-2	
Barium	**0.031**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 17:48	7440-39-3	
Boron	**3.6**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 17:48	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 17:48	7440-43-9	
Calcium	**234**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 17:54	7440-70-2	M6
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 17:48	7440-48-4	
Lithium	**0.020J**	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 17:48	7439-93-2	
Molybdenum	**0.016**	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 17:48	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 17:48	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1060**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**150**	mg/L	2.5	0.24	10		07/11/18 18:39	16887-00-6	
Fluoride	**0.038J**	mg/L	0.30	0.029	1		07/07/18 09:25	16984-48-8	
Sulfate	**541**	mg/L	25.0	0.42	25		07/13/18 01:40	14808-79-8	H5

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-14 **Lab ID: 266151002** Collected: 06/15/18 09:16 Received: 06/15/18 14:30 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								
Arsenic	**0.00074J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 18:40	7440-38-2	
Barium	**0.066**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 18:40	7440-39-3	
Boron	**0.95**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 18:40	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 18:40	7440-43-9	
Calcium	**113**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 18:45	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 18:40	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 18:40	7439-93-2	
Molybdenum	**0.012**	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 18:40	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 18:40	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**633**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**33.6**	mg/L	0.25	0.024	1		07/06/18 23:38	16887-00-6	
Fluoride	**0.41**	mg/L	0.30	0.029	1		07/06/18 23:38	16984-48-8	
Sulfate	**248**	mg/L	20.0	0.34	20		07/15/18 16:47	14808-79-8	H5

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-30 **Lab ID: 266151003** Collected: 06/15/18 10:06 Received: 06/15/18 14:30 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								
Arsenic	**0.00089J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 18:51	7440-38-2	
Barium	**0.087**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 18:51	7440-39-3	
Boron	**8.5**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 18:51	7440-42-8	
Cadmium	**0.00020J**	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 18:51	7440-43-9	
Calcium	**198**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 18:57	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 18:51	7440-48-4	
Lithium	**0.0049J**	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 18:51	7439-93-2	
Molybdenum	**0.012**	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 18:51	7439-98-7	
Thallium	**0.00056J**	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 18:51	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1190**	mg/L	25.0	10.0	1		06/19/18 10:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**390**	mg/L	5.0	0.48	20		07/15/18 17:08	16887-00-6	H5,M1
Fluoride	**0.51**	mg/L	0.30	0.029	1		07/06/18 23:59	16984-48-8	
Sulfate	**174**	mg/L	20.0	0.34	20		07/15/18 17:08	14808-79-8	H5,M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-19 **Lab ID: 266151004** Collected: 06/15/18 10:32 Received: 06/15/18 14:30 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								
Arsenic	**0.00074J**	mg/L	0.0050	0.00057	1	06/25/18 12:50	06/27/18 19:14	7440-38-2	
Barium	**0.032**	mg/L	0.010	0.00078	1	06/25/18 12:50	06/27/18 19:14	7440-39-3	
Boron	**0.44**	mg/L	0.040	0.0039	1	06/25/18 12:50	06/27/18 19:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/25/18 12:50	06/27/18 19:14	7440-43-9	
Calcium	**49.7**	mg/L	25.0	0.69	50	06/25/18 12:50	06/27/18 19:20	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	06/25/18 12:50	06/27/18 19:14	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	06/25/18 12:50	06/27/18 19:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/25/18 12:50	06/27/18 19:14	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	06/25/18 12:50	06/27/18 19:14	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**280**	mg/L	25.0	10.0	1		06/19/18 10:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**9.3**	mg/L	0.25	0.024	1		07/07/18 01:05	16887-00-6	
Fluoride	**0.070J**	mg/L	0.30	0.029	1		07/07/18 01:05	16984-48-8	
Sulfate	**78.3**	mg/L	10.0	0.17	10		07/15/18 17:29	14808-79-8	H5

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 8657 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266151001, 266151002, 266151003, 266151004

METHOD BLANK: 39888 Matrix: Water
Associated Lab Samples: 266151001, 266151002, 266151003, 266151004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	06/27/18 15:47	
Barium	mg/L	ND	0.010	0.00078	06/27/18 15:47	
Boron	mg/L	ND	0.040	0.0039	06/27/18 15:47	
Cadmium	mg/L	ND	0.0010	0.000093	06/27/18 15:47	
Calcium	mg/L	ND	0.50	0.014	06/27/18 15:47	
Cobalt	mg/L	ND	0.010	0.00052	06/27/18 15:47	
Lithium	mg/L	ND	0.050	0.00097	06/27/18 15:47	
Molybdenum	mg/L	ND	0.010	0.0019	06/27/18 15:47	
Thallium	mg/L	ND	0.0010	0.00014	06/27/18 15:47	

LABORATORY CONTROL SAMPLE: 39889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.095	95	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.11	111	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39890 39891

Parameter	Units	266151001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0015J	.1	.1	0.11	0.11	108	108	75-125	1	20	
Barium	mg/L	0.031	.1	.1	0.13	0.13	100	99	75-125	1	20	
Boron	mg/L	3.6	1	1	4.5	4.5	93	89	75-125	1	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	1	20	
Calcium	mg/L	234	1	1	227	224	-703	-958	75-125	1	20	M6
Cobalt	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	0	20	
Lithium	mg/L	0.020J	.1	.1	0.12	0.13	104	106	75-125	1	20	
Molybdenum	mg/L	0.016	.1	.1	0.12	0.12	105	105	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.097	0.099	97	99	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 Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 8184 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266151001, 266151002, 266151003

LABORATORY CONTROL SAMPLE: 37930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	84-108	

SAMPLE DUPLICATE: 37931

Parameter	Units	266151001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1060	1110	5	10	

SAMPLE DUPLICATE: 37932

Parameter	Units	266149010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2400	2290	5	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 Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 8266
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266151004

LABORATORY CONTROL SAMPLE: 38177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	402	100	84-108	

SAMPLE DUPLICATE: 38178

Parameter	Units	266151004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	280	296	6	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 Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 9362
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266151001

METHOD BLANK: 42594 Matrix: Water
Associated Lab Samples: 266151001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.41	0.25	0.024	07/07/18 02:32	
Fluoride	mg/L	ND	0.30	0.029	07/07/18 02:32	
Sulfate	mg/L	ND	1.0	0.017	07/07/18 02:32	

LABORATORY CONTROL SAMPLE: 42595

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE SAMPLE: 42598

Parameter	Units	266701006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4010	10	768	-32500	90-110	E
Fluoride	mg/L	0.12J	10	9.3	92	90-110	
Sulfate	mg/L	741	10	355	-3860	90-110	E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 42596 42597

Parameter	Units	266698001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1910	10	10	108	318	-18000	-15900	90-110	98	15	E,M1, R2
Fluoride	mg/L	0.12J	10	10	10.2	10.2	100	101	90-110	1	15	
Sulfate	mg/L	352	10	10	222	222	-1290	-1290	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

QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 9363 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266151002, 266151003, 266151004

METHOD BLANK: 42599 Matrix: Water
Associated Lab Samples: 266151002, 266151003, 266151004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.29	0.25	0.024	07/06/18 22:34	
Fluoride	mg/L	ND	0.30	0.029	07/06/18 22:34	
Sulfate	mg/L	ND	1.0	0.017	07/06/18 22:34	

LABORATORY CONTROL SAMPLE: 42600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 42601 42602

Parameter	Units	266151003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	390	10	10	130	129	-2600	-2600	90-110	1	15	E,M1
Fluoride	mg/L	0.51	10	10	9.9	10	94	95	90-110	1	15	
Sulfate	mg/L	174	10	10	140	140	-342	-342	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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-20 **Lab ID: 266151001** Collected: 06/13/18 16:01 Received: 06/15/18 14:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.578 ± 0.297 (0.420) C:98% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.108 ± 0.312 (0.702) C:80% T:81%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.686 ± 0.609 (1.12)**	pCi/L	07/13/18 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-14 **Lab ID: 266151002** Collected: 06/15/18 09:16 Received: 06/15/18 14:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**5.08 ± 1.06 (0.393) C:92% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**1.12 ± 0.443 (0.669) C:77% T:83%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**6.20 ± 1.50 (1.06)**	pCi/L	07/13/18 13:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-30 **Lab ID: 266151003** Collected: 06/15/18 10:06 Received: 06/15/18 14:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.483 ± 0.268 (0.372) C:95% T:NA**	pCi/L	07/03/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.332 ± 0.412 (0.872) C:79% T:71%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.815 ± 0.680 (1.24)**	pCi/L	07/13/18 13:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Sample: BGWC-19 **Lab ID: 266151004** Collected: 06/15/18 10:32 Received: 06/15/18 14:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.232 ± 0.260 (0.542) C:93% T:NA**	pCi/L	07/03/18 11:31	13982-63-3	
Radium-228	EPA 9320	**0.393 ± 0.342 (0.688) C:80% T:82%**	pCi/L	07/12/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.625 ± 0.602 (1.23)**	pCi/L	07/13/18 13:27	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 Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 302918 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266151001, 266151002, 266151003, 266151004

METHOD BLANK: 1482114 Matrix: Water
Associated Lab Samples: 266151001, 266151002, 266151003, 266151004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.185 ± 0.238 (0.509) C:91% T:NA	pCi/L	07/03/18 09:58	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

QC Batch: 302924 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266151001, 266151002, 266151003, 266151004

METHOD BLANK: 1482129 Matrix: Water
Associated Lab Samples: 266151001, 266151002, 266151003, 266151004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0380 ± 0.331 (0.764) C:76% T:78%	pCi/L	07/12/18 15:05	

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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 Bowen Ash Pond
Pace Project No.: 266151

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-GA	Pace Analytical Services - Atlanta, GA
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold 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.
R2	RPD value was outside control limits due to matrix interference

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 266151

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266151001	**BGWC-20**	EPA 3005A	8657	EPA 6020B	8854
266151002	**BGWC-14**	EPA 3005A	8657	EPA 6020B	8854
266151003	**BGWC-30**	EPA 3005A	8657	EPA 6020B	8854
266151004	**BGWC-19**	EPA 3005A	8657	EPA 6020B	8854
266151001	**BGWC-20**	EPA 9315	302918		
266151002	**BGWC-14**	EPA 9315	302918		
266151003	**BGWC-30**	EPA 9315	302918		
266151004	**BGWC-19**	EPA 9315	302918		
266151001	**BGWC-20**	EPA 9320	302924		
266151002	**BGWC-14**	EPA 9320	302924		
266151003	**BGWC-30**	EPA 9320	302924		
266151004	**BGWC-19**	EPA 9320	302924		
266151001	**BGWC-20**	Total Radium Calculation	305684		
266151002	**BGWC-14**	Total Radium Calculation	305741		
266151003	**BGWC-30**	Total Radium Calculation	305741		
266151004	**BGWC-19**	Total Radium Calculation	305741		
266151001	**BGWC-20**	SM 2540C	8184		
266151002	**BGWC-14**	SM 2540C	8184		
266151003	**BGWC-30**	SM 2540C	8184		
266151004	**BGWC-19**	SM 2540C	8266		
266151001	**BGWC-20**	EPA 300.0	9362		
266151002	**BGWC-14**	EPA 300.0	9363		
266151003	**BGWC-30**	EPA 300.0	9363		
266151004	**BGWC-19**	EPA 300.0	9363		

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:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:		Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Bowen Appendix III	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	317.3

Regulatory Agency: | State / Location: GA

Requested Analysis Filtered (Y/N)

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: TDS by 2540C	CL, F, SO4, pH	B,Ca,As,Be,Cd,Co,Li,Mo,Tl	Radium 226/228	Residual Chlorine (Y/N)
1	BGWL-20	WT	G	6/13/18	1601				5	X		X						1	1	1	Z	
2	BGWL-14	WT	G	6/15/18	0916				5	X		X						1	1	1	Z	
3	BGWL-30	WT	G	6/15/18	1006				5	X		X						1	1	1	Z	
4	BGWL-19	WT	G	6/15/18	1032				5	X		X						1	1	1	Z	
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

WO#: 266151

266151

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Robert Bell	6/15/18	1427	MDalman	6/15/18	1430

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Robert Bell, Kevin Stidham, Veronica Fay

SIGNATURE of SAMPLER: Robert Bell DATE Signed: 6/15/18

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266151

PM: BM **Due Date: 07/16/18**

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 2.1 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/15/18 MP

				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 05, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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,

Sakina Mckenzie for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

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 Bowen Ash Pond
Pace Project No.: 2610640

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610640001	**BGWC-7**	Water	10/18/18 08:50	10/19/18 11:00
2610640002	**BGWC-10**	Water	10/18/18 12:05	10/19/18 11:00
2610640003	**BGWC-16**	Water	10/18/18 13:55	10/19/18 11:00
2610640004	**BGWC-18**	Water	10/18/18 15:36	10/19/18 11:00
2610640005	**BGWC-31**	Water	10/18/18 15:26	10/19/18 11:00
2610640006	**Dup-2**	Water	10/18/18 00:00	10/19/18 11:00

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610640001	**BGWC-7**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610640002	**BGWC-10**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610640003	**BGWC-16**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610640004	**BGWC-18**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610640005	**BGWC-31**	EPA 6020B	CSW	2
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610640006	**Dup-2**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Sample: BGWC-7 **Lab ID: 2610640001** Collected: 10/18/18 08:50 Received: 10/19/18 11:00 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								
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 20:10	7440-38-2	
Barium	**0.037**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 20:10	7440-39-3	
Boron	**1.9**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 20:10	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 20:10	7440-43-9	
Calcium	**154**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 20:16	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 20:10	7440-48-4	
Lithium	**0.0083J**	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 20:10	7439-93-2	
Molybdenum	**0.010J**	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 20:10	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 20:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**876**	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.7**	mg/L	0.25	0.024	1		10/22/18 23:10	16887-00-6	
Fluoride	**0.047J**	mg/L	0.30	0.029	1		10/22/18 23:10	16984-48-8	
Sulfate	**438**	mg/L	10.0	0.17	10		10/24/18 20:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Sample: BGWC-10 **Lab ID: 2610640002** Collected: 10/18/18 12:05 Received: 10/19/18 11:00 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								
Arsenic	**0.0056**	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 20:21	7440-38-2	
Barium	**0.053**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 20:21	7440-39-3	
Boron	**0.49**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 20:21	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 20:21	7440-43-9	
Calcium	**57.8**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 20:27	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 20:21	7440-48-4	
Lithium	**0.0016J**	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 20:21	7439-93-2	
Molybdenum	**0.0034J**	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 20:21	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 20:21	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**355**	mg/L	25.0	10.0	1		10/19/18 16:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**26.9**	mg/L	0.25	0.024	1		10/22/18 23:32	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/22/18 23:32	16984-48-8	
Sulfate	**122**	mg/L	10.0	0.17	10		10/24/18 20:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Sample: BGWC-16 **Lab ID: 2610640003** Collected: 10/18/18 13:55 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 20:33	7440-38-2	
Barium	**0.026**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 20:33	7440-39-3	
Boron	**1.3**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 20:33	7440-42-8	
Cadmium	**0.0012**	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 20:33	7440-43-9	
Calcium	**112**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 20:38	7440-70-2	
Cobalt	**0.0047J**	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 20:33	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 20:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 20:33	7439-98-7	
Thallium	**0.00020J**	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 20:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**578**	mg/L	25.0	10.0	1		10/19/18 16:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**25.2**	mg/L	0.25	0.024	1		10/22/18 23:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/22/18 23:55	16984-48-8	
Sulfate	**276**	mg/L	10.0	0.17	10		10/24/18 21:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Sample: BGWC-18 **Lab ID: 2610640004** Collected: 10/18/18 15:36 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 20:44	7440-38-2	
Barium	**0.033**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 20:44	7440-39-3	
Boron	**0.80**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 20:44	7440-42-8	
Cadmium	**0.00032J**	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 20:44	7440-43-9	
Calcium	**60.4**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 20:50	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 20:44	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 20:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 20:44	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 20:44	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**325**	mg/L	25.0	10.0	1		10/19/18 16:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.9**	mg/L	0.25	0.024	1		10/23/18 00:18	16887-00-6	
Fluoride	**0.054J**	mg/L	0.30	0.029	1		10/23/18 00:18	16984-48-8	
Sulfate	**89.3**	mg/L	10.0	0.17	10		10/24/18 21:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Sample: BGWC-31 **Lab ID: 2610640005** Collected: 10/18/18 15:26 Received: 10/19/18 11:00 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	10/22/18 13:23	10/23/18 21:07	7440-42-8	
Calcium	**90.1**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 21:13	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**501**	mg/L	25.0	10.0	1		10/19/18 16:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**51.2**	mg/L	2.5	0.24	10		10/24/18 22:00	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 00:40	16984-48-8	
Sulfate	**199**	mg/L	10.0	0.17	10		10/24/18 22:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

Sample: Dup-2 **Lab ID: 2610640006** Collected: 10/18/18 00:00 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 21:19	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 21:19	7440-39-3	
Boron	**1.3**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 21:19	7440-42-8	
Cadmium	**0.0011**	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 21:19	7440-43-9	
Calcium	**109**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 21:24	7440-70-2	
Cobalt	**0.0046J**	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 21:19	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 21:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 21:19	7439-98-7	
Thallium	**0.00020J**	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 21:19	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**588**	mg/L	25.0	10.0	1		10/19/18 16:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**25.3**	mg/L	0.25	0.024	1		10/23/18 01:03	16887-00-6	
Fluoride	**0.039J**	mg/L	0.30	0.029	1		10/23/18 01:03	16984-48-8	
Sulfate	**275**	mg/L	10.0	0.17	10		10/24/18 22:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

QC Batch: 15773 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2610640001, 2610640002, 2610640003, 2610640004, 2610640005, 2610640006

METHOD BLANK: 70375 Matrix: Water
Associated Lab Samples: 2610640001, 2610640002, 2610640003, 2610640004, 2610640005, 2610640006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	10/23/18 19:58	
Barium	mg/L	ND	0.010	0.00078	10/23/18 19:58	
Boron	mg/L	ND	0.040	0.0039	10/23/18 19:58	
Cadmium	mg/L	ND	0.0010	0.000093	10/23/18 19:58	
Calcium	mg/L	ND	0.50	0.014	10/23/18 19:58	
Cobalt	mg/L	ND	0.010	0.00052	10/23/18 19:58	
Lithium	mg/L	ND	0.050	0.00097	10/23/18 19:58	
Molybdenum	mg/L	ND	0.010	0.0019	10/23/18 19:58	
Thallium	mg/L	ND	0.0010	0.00014	10/23/18 19:58	

LABORATORY CONTROL SAMPLE: 70376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.096	96	80-120	
Barium	mg/L	.1	0.096	96	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Cobalt	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.094	94	80-120	
Thallium	mg/L	.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70377 70378

Parameter	Units	2610644003 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	0.097	0.097	97	97	75-125	0	20	
Barium	mg/L	0.015	.1	.1	0.11	0.11	96	97	75-125	0	20	
Boron	mg/L	1.4	1	1	2.4	2.5	101	109	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.096	0.096	96	96	75-125	0	20	
Calcium	mg/L	69.7	1	1	70.1	69.0	39	-72	75-125	2	20	M6
Cobalt	mg/L	ND	.1	.1	0.095	0.095	94	95	75-125	0	20	
Lithium	mg/L	ND	.1	.1	0.096	0.10	96	101	75-125	5	20	
Molybdenum	mg/L	ND	.1	.1	0.097	0.097	97	97	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.092	0.090	92	90	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
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

QC Batch: 15705 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2610640001, 2610640002, 2610640003, 2610640004, 2610640005, 2610640006

LABORATORY CONTROL SAMPLE: 70101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	84-108	

SAMPLE DUPLICATE: 70102

Parameter	Units	2610585028 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7280	7360	1	10	

SAMPLE DUPLICATE: 70103

Parameter	Units	2610603002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	80.0	74.0	8	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
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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2610640

QC Batch: 15802 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2610640001, 2610640002, 2610640003, 2610640004, 2610640005, 2610640006

METHOD BLANK: 70443 Matrix: Water
Associated Lab Samples: 2610640001, 2610640002, 2610640003, 2610640004, 2610640005, 2610640006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	10/22/18 21:17	
Fluoride	mg/L	ND	0.30	0.029	10/22/18 21:17	
Sulfate	mg/L	ND	1.0	0.017	10/22/18 21:17	

LABORATORY CONTROL SAMPLE: 70444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70445 70446

Parameter	Units	2610629001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	1.2	10	10	11.3	11.3	101	101	90-110	0	15	
Sulfate	mg/L	10.4	10	10	20.7	20.7	102	103	90-110	0	15	

MATRIX SPIKE SAMPLE: 70447

Parameter	Units	2610640001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.7	10	20.8	91	90-110	
Fluoride	mg/L	0.047J	10	10.1	101	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 Bowen Ash Pond
Pace Project No.: 2610640

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.

WORKORDER QUALIFIERS

WO: 2610640

[1] 12/05/2018: Report revised to add the chain of custody to the final report.

ANALYTE QUALIFIERS

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 Bowen Ash Pond
Pace Project No.: 2610640

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610640001	**BGWC-7**	EPA 3005A	15773	EPA 6020B	15799
2610640002	**BGWC-10**	EPA 3005A	15773	EPA 6020B	15799
2610640003	**BGWC-16**	EPA 3005A	15773	EPA 6020B	15799
2610640004	**BGWC-18**	EPA 3005A	15773	EPA 6020B	15799
2610640005	**BGWC-31**	EPA 3005A	15773	EPA 6020B	15799
2610640006	**Dup-2**	EPA 3005A	15773	EPA 6020B	15799
2610640001	**BGWC-7**	SM 2540C	15705		
2610640002	**BGWC-10**	SM 2540C	15705		
2610640003	**BGWC-16**	SM 2540C	15705		
2610640004	**BGWC-18**	SM 2540C	15705		
2610640005	**BGWC-31**	SM 2540C	15705		
2610640006	**Dup-2**	SM 2540C	15705		
2610640001	**BGWC-7**	EPA 300.0	15802		
2610640002	**BGWC-10**	EPA 300.0	15802		
2610640003	**BGWC-16**	EPA 300.0	15802		
2610640004	**BGWC-18**	EPA 300.0	15802		
2610640005	**BGWC-31**	EPA 300.0	15802		
2610640006	**Dup-2**	EPA 300.0	15802		

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

Regulatory Agency	
State / Location	GA

Requested Analysis Filtered (Y/N)

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)	
1	BGWC-7	WT	G	10/18/18	0851				4	1		3							X	X	X	X		
2	BGWC-10	WT	G	10/18/18	1205				4	1		3							X	X	X	X		
3	BGWC-16	WT	G	10/18/18	1355				6	1		5							X	X	X	X		
4	BGWC-18	WT	G	10/18/18	1536				4	1		3							X	X	X	X		
5	BGWC-31	WT	G	10/18/18	1526				4	1		3							X	X				Hold for App IV
6	DUP-2	WT	G	10/18/18	—				4	1		3							X	X	X	X		
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO# : 2610640

2610640

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Veronica Fox	10/19/18	0946	Mike Nguyen/Pace	10/19/18	0946	
				MDalman	10/19/18	1100	
							1.5 Y Y Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Kevin Stephenson, Audrey Crafton		
SIGNATURE of SAMPLER:	AudreyCrafton	DATE Signed:	10-18-18

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # _____

WO#: 2610640

PM: BM Due Date: 10/26/18

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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/19/18 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: 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

November 12, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610642

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610642

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 Bowen Ash Pond
Pace Project No.: 2610642

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610642001	**BGWC-7**	Water	10/18/18 08:50	10/19/18 11:00
2610642002	**BGWC-10**	Water	10/18/18 12:05	10/19/18 11:00
2610642003	**BGWC-16**	Water	10/18/18 13:55	10/19/18 11:00
2610642004	**BGWC-18**	Water	10/18/18 15:36	10/19/18 11:00
2610642005	**Dup-2**	Water	10/18/18 00:00	10/19/18 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610642

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610642001	**BGWC-7**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610642002	**BGWC-10**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610642003	**BGWC-16**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610642004	**BGWC-18**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610642005	**Dup-2**	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 Bowen Ash Pond
Pace Project No.: 2610642

Sample: BGWC-7 **Lab ID: 2610642001** Collected: 10/18/18 08:50 Received: 10/19/18 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	**0.647 ± 0.229 (0.256) C:90% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.455 ± 0.339 (0.660) C:77% T:85%**	pCi/L	11/01/18 12:06	15262-20-1	
Total Radium	Total Radium Calculation	**1.10 ± 0.568 (0.916)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610642

Sample: BGWC-10 **Lab ID: 2610642002** Collected: 10/18/18 12:05 Received: 10/19/18 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	**0.412 ± 0.181 (0.226) C:90% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.429 ± 0.368 (0.741) C:75% T:90%**	pCi/L	11/01/18 12:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.841 ± 0.549 (0.967)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610642

Sample: BGWC-16 **Lab ID: 2610642003** Collected: 10/18/18 13:55 Received: 10/19/18 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	**0.243 ± 0.138 (0.199) C:95% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.279 ± 0.356 (0.758) C:77% T:82%**	pCi/L	11/01/18 15:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.522 ± 0.494 (0.957)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610642

Sample: BGWC-18 **Lab ID: 2610642004** Collected: 10/18/18 15:36 Received: 10/19/18 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	**0.299 ± 0.148 (0.179) C:93% T:NA**	pCi/L	11/06/18 11:20	13982-63-3	
Radium-228	EPA 9320	**0.576 ± 0.392 (0.758) C:74% T:91%**	pCi/L	11/01/18 15:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.875 ± 0.540 (0.937)**	pCi/L	11/09/18 12:09	7440-14-4	

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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610642

Sample: Dup-2 **Lab ID: 2610642005** Collected: 10/18/18 00:00 Received: 10/19/18 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	**0.256 ± 0.140 (0.197) C:95% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.339 ± 0.413 (0.872) C:75% T:72%**	pCi/L	11/01/18 15:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.595 ± 0.553 (1.07)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610642

QC Batch: 317858 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2610642001, 2610642002, 2610642003, 2610642004, 2610642005

METHOD BLANK: 1550522 Matrix: Water
Associated Lab Samples: 2610642001, 2610642002, 2610642003, 2610642004, 2610642005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.177 ± 0.319 (0.697) C:77% T:91%	pCi/L	11/01/18 12:04	

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 Bowen Ash Pond
Pace Project No.: 2610642

QC Batch: 317859 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610642001, 2610642002, 2610642003, 2610642004, 2610642005

METHOD BLANK: 1550523 Matrix: Water
Associated Lab Samples: 2610642001, 2610642002, 2610642003, 2610642004, 2610642005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.113 ± 0.0985 (0.175) C:98% T:NA	pCi/L	11/06/18 08:10	

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

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610642

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 Bowen Ash Pond
Pace Project No.: 2610642

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610642001	**BGWC-7**	EPA 9315	317859		
2610642002	**BGWC-10**	EPA 9315	317859		
2610642003	**BGWC-16**	EPA 9315	317859		
2610642004	**BGWC-18**	EPA 9315	317859		
2610642005	**Dup-2**	EPA 9315	317859		
2610642001	**BGWC-7**	EPA 9320	317858		
2610642002	**BGWC-10**	EPA 9320	317858		
2610642003	**BGWC-16**	EPA 9320	317858		
2610642004	**BGWC-18**	EPA 9320	317858		
2610642005	**Dup-2**	EPA 9320	317858		
2610642001	**BGWC-7**	Total Radium Calculation	319916		
2610642002	**BGWC-10**	Total Radium Calculation	319916		
2610642003	**BGWC-16**	Total Radium Calculation	319916		
2610642004	**BGWC-18**	Total Radium Calculation	319916		
2610642005	**Dup-2**	Total Radium Calculation	319916		

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	315

Regulatory Agency

State / Location: GA

Requested Analysis Filtered (Y/N)

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWC-7	WT	G	10/18/18	0850				4	1		3							X	X	X	X	
2	BGWC-10	WT	G	10/18/18	1205				4	1		3							X	X	X	X	
3	BGWC-16	WT	G	10/18/18	1355				6	1		5							X	X	X	X	
4	BGWC-18	WT	G	10/18/18	1536				4	1		3							X	X	X	X	
5	BGWC-31	WT	G	10/18/18	1526				4	1		3							X	X			Hold for App IV
6	DUP-2	WT	G	10/18/18	—				4	1		3							X	X	X	X	
7																							
8																							
9																							
10																							
11																							
12																							

WO# : 2610642

2610642

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Veronica Fox	10/19/18	0946	Mike Nguyen/Pace	10/19/18	0946	
				MRaCman	10/19/18	1100	
							1.5

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Audrey Crafton

SIGNATURE of SAMPLER: AudreyCrafton DATE Signed: 10-18-18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610642

PM: BM Due Date: 11/16/18

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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/19/18 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: 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

October 26, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610644

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610644

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 Bowen Ash Pond
Pace Project No.: 2610644

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610644001	**BGWC-9**	Water	10/17/18 13:13	10/19/18 11:00
2610644002	**BGWC-12**	Water	10/17/18 16:00	10/19/18 11:00
2610644003	**BGWC-17**	Water	10/17/18 16:00	10/19/18 11:00
2610644004	**BGWC-36D**	Water	10/17/18 10:52	10/19/18 11:00
2610644005	**FBL 101718**	Water	10/17/18 13:30	10/19/18 11:00
2610644006	**EQBL 101718**	Water	10/17/18 13:34	10/19/18 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610644

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610644001	**BGWC-9**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610644002	**BGWC-12**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610644003	**BGWC-17**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610644004	**BGWC-36D**	EPA 6020B	CSW	2
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610644005	**FBL 101718**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610644006	**EQBL 101718**	EPA 6020B	CSW	9
		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 Bowen Ash Pond
Pace Project No.: 2610644

Sample: BGWC-9 **Lab ID: 2610644001** Collected: 10/17/18 13:13 Received: 10/19/18 11:00 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								
Arsenic	**0.0035J**	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 21:30	7440-38-2	
Barium	**0.037**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 21:30	7440-39-3	
Boron	**0.61**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 21:30	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 21:30	7440-43-9	
Calcium	**63.0**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 21:36	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 21:30	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 21:30	7439-93-2	
Molybdenum	**0.0038J**	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 21:30	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 21:30	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**377**	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**29.4**	mg/L	0.25	0.024	1		10/23/18 01:26	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		10/23/18 01:26	16984-48-8	
Sulfate	**117**	mg/L	10.0	0.17	10		10/24/18 22:45	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 Bowen Ash Pond
Pace Project No.: 2610644

Sample: BGWC-12 **Lab ID: 2610644002** Collected: 10/17/18 16:00 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 21:41	7440-38-2	
Barium	**0.033**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 21:41	7440-39-3	
Boron	**1.0**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 21:41	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 21:41	7440-43-9	
Calcium	**110**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 21:47	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 21:41	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 21:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 21:41	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 21:41	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**739**	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**30.7**	mg/L	0.25	0.024	1		10/23/18 03:19	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 03:19	16984-48-8	
Sulfate	**336**	mg/L	10.0	0.17	10		10/24/18 23:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610644

Sample: BGWC-17 **Lab ID: 2610644003** Collected: 10/17/18 16:00 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 21:53	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 21:53	7440-39-3	
Boron	**1.4**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 21:53	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 21:53	7440-43-9	
Calcium	**69.7**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 21:59	7440-70-2	M6
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 21:53	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 21:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 21:53	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 21:53	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**446**	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**41.8**	mg/L	0.25	0.024	1		10/23/18 03:41	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 03:41	16984-48-8	
Sulfate	**118**	mg/L	10.0	0.17	10		10/24/18 23:30	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 Bowen Ash Pond
Pace Project No.: 2610644

Sample: BGWC-36D **Lab ID: 2610644004** Collected: 10/17/18 10:52 Received: 10/19/18 11:00 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	**9.7**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 22:44	7440-42-8	
Calcium	**262**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 22:50	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1200**	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**492**	mg/L	2.5	0.24	10		10/25/18 01:24	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 04:27	16984-48-8	
Sulfate	**277**	mg/L	10.0	0.17	10		10/25/18 01:24	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 Bowen Ash Pond
Pace Project No.: 2610644

Sample: FBL 101718 **Lab ID: 2610644005** Collected: 10/17/18 13:30 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 22:56	7440-38-2	
Barium	**0.0023J**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 22:56	7440-39-3	
Boron	**0.012J**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 22:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 22:56	7440-43-9	
Calcium	**0.065J**	mg/L	0.50	0.014	1	10/22/18 13:23	10/23/18 22:56	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 22:56	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 22:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 22:56	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 22:56	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.089J**	mg/L	0.25	0.024	1		10/23/18 04:49	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 04:49	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/23/18 04:49	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 Bowen Ash Pond
Pace Project No.: 2610644

Sample: EQBL 101718 **Lab ID: 2610644006** Collected: 10/17/18 13:34 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 23:02	7440-38-2	
Barium	**0.0025J**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 23:02	7440-39-3	
Boron	**0.0074J**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 23:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 23:02	7440-43-9	
Calcium	**0.034J**	mg/L	0.50	0.014	1	10/22/18 13:23	10/23/18 23:02	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 23:02	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 23:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 23:02	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 23:02	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**10.0J**	mg/L	25.0	10.0	1		10/19/18 16:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.068J**	mg/L	0.25	0.024	1		10/23/18 05:12	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 05:12	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/23/18 05:12	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 Bowen Ash Pond
Pace Project No.: 2610644

QC Batch: 15773 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2610644001, 2610644002, 2610644003, 2610644004, 2610644005, 2610644006

METHOD BLANK: 70375 Matrix: Water
Associated Lab Samples: 2610644001, 2610644002, 2610644003, 2610644004, 2610644005, 2610644006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	10/23/18 19:58	
Barium	mg/L	ND	0.010	0.00078	10/23/18 19:58	
Boron	mg/L	ND	0.040	0.0039	10/23/18 19:58	
Cadmium	mg/L	ND	0.0010	0.000093	10/23/18 19:58	
Calcium	mg/L	ND	0.50	0.014	10/23/18 19:58	
Cobalt	mg/L	ND	0.010	0.00052	10/23/18 19:58	
Lithium	mg/L	ND	0.050	0.00097	10/23/18 19:58	
Molybdenum	mg/L	ND	0.010	0.0019	10/23/18 19:58	
Thallium	mg/L	ND	0.0010	0.00014	10/23/18 19:58	

LABORATORY CONTROL SAMPLE: 70376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.096	96	80-120	
Barium	mg/L	.1	0.096	96	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Cobalt	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.094	94	80-120	
Thallium	mg/L	.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70377 70378

Parameter	Units	2610644003 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	0.097	0.097	97	97	75-125	0	20	
Barium	mg/L	0.015	.1	.1	0.11	0.11	96	97	75-125	0	20	
Boron	mg/L	1.4	1	1	2.4	2.5	101	109	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.096	0.096	96	96	75-125	0	20	
Calcium	mg/L	69.7	1	1	70.1	69.0	39	-72	75-125	2	20	M6
Cobalt	mg/L	ND	.1	.1	0.095	0.095	94	95	75-125	0	20	
Lithium	mg/L	ND	.1	.1	0.096	0.10	96	101	75-125	5	20	
Molybdenum	mg/L	ND	.1	.1	0.097	0.097	97	97	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.092	0.090	92	90	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 Bowen Ash Pond
Pace Project No.: 2610644

QC Batch: 15705 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2610644001, 2610644002, 2610644003, 2610644004, 2610644005, 2610644006

LABORATORY CONTROL SAMPLE: 70101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	84-108	

SAMPLE DUPLICATE: 70102

Parameter	Units	2610585028 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7280	7360	1	10	

SAMPLE DUPLICATE: 70103

Parameter	Units	2610603002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	80.0	74.0	8	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 Bowen Ash Pond
Pace Project No.: 2610644

QC Batch: 15802 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2610644001, 2610644002, 2610644003, 2610644004, 2610644005, 2610644006

METHOD BLANK: 70443 Matrix: Water
Associated Lab Samples: 2610644001, 2610644002, 2610644003, 2610644004, 2610644005, 2610644006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	10/22/18 21:17	
Fluoride	mg/L	ND	0.30	0.029	10/22/18 21:17	
Sulfate	mg/L	ND	1.0	0.017	10/22/18 21:17	

LABORATORY CONTROL SAMPLE: 70444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70445 70446

Parameter	Units	2610629001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	1.2	10	10	11.3	11.3	101	101	90-110	0	15	
Sulfate	mg/L	10.4	10	10	20.7	20.7	102	103	90-110	0	15	

MATRIX SPIKE SAMPLE: 70447

Parameter	Units	2610640001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.7	10	20.8	91	90-110	
Fluoride	mg/L	0.047J	10	10.1	101	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 Bowen Ash Pond
Pace Project No.: 2610644

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

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 Bowen Ash Pond
Pace Project No.: 2610644

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610644001	**BGWC-9**	EPA 3005A	15773	EPA 6020B	15799
2610644002	**BGWC-12**	EPA 3005A	15773	EPA 6020B	15799
2610644003	**BGWC-17**	EPA 3005A	15773	EPA 6020B	15799
2610644004	**BGWC-36D**	EPA 3005A	15773	EPA 6020B	15799
2610644005	**FBL 101718**	EPA 3005A	15773	EPA 6020B	15799
2610644006	**EQBL 101718**	EPA 3005A	15773	EPA 6020B	15799
2610644001	**BGWC-9**	SM 2540C	15705		
2610644002	**BGWC-12**	SM 2540C	15705		
2610644003	**BGWC-17**	SM 2540C	15705		
2610644004	**BGWC-36D**	SM 2540C	15705		
2610644005	**FBL 101718**	SM 2540C	15705		
2610644006	**EQBL 101718**	SM 2540C	15705		
2610644001	**BGWC-9**	EPA 300.0	15802		
2610644002	**BGWC-12**	EPA 300.0	15802		
2610644003	**BGWC-17**	EPA 300.0	15802		
2610644004	**BGWC-36D**	EPA 300.0	15802		
2610644005	**FBL 101718**	EPA 300.0	15802		
2610644006	**EQBL 101718**	EPA 300.0	15802		

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

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	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List +-)	Radium 226, 228	Residual Chlorine (Y/N)	
1	BGWC-9	WT	G	10/17/18	1313				4	1		3							X	X	X	X		
2	BGWC-12	WT	G	10/17/18	1600				4	1		3							X	X	X	X		
3	BGWC-17	WT	G	10/17/18	1600				6	1		5							X	X	X	X		
4	BGWC-36D	WT	G	10/17/18	1052				4	1		3							X	X				Hold for App IV
5	FBL 101718	WT	G	10/17/18	1330				4	1		3							X	X	X	X		
6	EQBL101718	WT	G	10/17/18	1334				4	1		3							X	X	X	X		
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO# : 2610644

2610644

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)
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo Only!	Veronica Fay	10/19/18	0946	Mike Nguyen/Pace	10/19/18	0946				
				M Zalman	10/19/18	1100				
							1.5	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Veronica Fay, Audrey Crafton

SIGNATURE of SAMPLER: Veronica Fay

DATE Signed: 10-17-18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610644

PM: BM Due Date: 10/26/18

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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/19/18 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: 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

November 12, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610645

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610645

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 Bowen Ash Pond
Pace Project No.: 2610645

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610645001	**BGWC-9**	Water	10/17/18 13:13	10/19/18 11:00
2610645002	**BGWC-12**	Water	10/17/18 16:00	10/19/18 11:00
2610645003	**BGWC-17**	Water	10/17/18 16:00	10/19/18 11:00
2610645004	**FBL 101718**	Water	10/17/18 13:30	10/19/18 11:00
2610645005	**EQBL 101718**	Water	10/17/18 13:34	10/19/18 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610645

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610645001	**BGWC-9**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610645002	**BGWC-12**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610645003	**BGWC-17**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610645004	**FBL 101718**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610645005	**EQBL 101718**	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 Bowen Ash Pond
Pace Project No.: 2610645

Sample: BGWC-9 **Lab ID: 2610645001** Collected: 10/17/18 13:13 Received: 10/19/18 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	**0.319 ± 0.144 (0.161) C:95% T:NA**	pCi/L	11/06/18 12:52	13982-63-3	
Radium-228	EPA 9320	**-0.0382 ± 0.292 (0.695) C:77% T:83%**	pCi/L	11/01/18 15:25	15262-20-1	
Total Radium	Total Radium Calculation	**0.319 ± 0.436 (0.856)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610645

Sample: BGWC-12 **Lab ID: 2610645002** Collected: 10/17/18 16:00 Received: 10/19/18 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	**0.109 ± 0.103 (0.190) C:84% T:NA**	pCi/L	11/06/18 12:52	13982-63-3	
Radium-228	EPA 9320	**0.217 ± 0.335 (0.724) C:75% T:86%**	pCi/L	11/01/18 15:25	15262-20-1	
Total Radium	Total Radium Calculation	**0.326 ± 0.438 (0.914)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610645

Sample: BGWC-17 **Lab ID: 2610645003** Collected: 10/17/18 16:00 Received: 10/19/18 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	**0.134 ± 0.102 (0.166) C:91% T:NA**	pCi/L	11/06/18 16:09	13982-63-3	
Radium-228	EPA 9320	**0.421 ± 0.335 (0.662) C:77% T:88%**	pCi/L	11/01/18 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.555 ± 0.437 (0.828)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610645

Sample: FBL 101718 **Lab ID: 2610645004** Collected: 10/17/18 13:30 Received: 10/19/18 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	**0.0835 ± 0.0873 (0.168) C:96% T:NA**	pCi/L	11/06/18 14:36	13982-63-3	
Radium-228	EPA 9320	**0.424 ± 0.364 (0.733) C:79% T:80%**	pCi/L	11/01/18 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.508 ± 0.451 (0.901)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610645

Sample: EQBL 101718 **Lab ID: 2610645005** Collected: 10/17/18 13:34 Received: 10/19/18 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	**0.162 ± 0.122 (0.188) C:84% T:NA**	pCi/L	11/06/18 09:21	13982-63-3	
Radium-228	EPA 9320	**0.378 ± 0.282 (0.548) C:79% T:98%**	pCi/L	11/01/18 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.540 ± 0.404 (0.736)**	pCi/L	11/09/18 12:15	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 Bowen Ash Pond
Pace Project No.: 2610645

QC Batch: 318192 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610645005

METHOD BLANK: 1552035 Matrix: Water
Associated Lab Samples: 2610645005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0766 ± 0.110 (0.238) C:97% T:NA	pCi/L	11/06/18 08:09	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610645

QC Batch: 317858 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2610645001, 2610645002, 2610645003, 2610645004, 2610645005

METHOD BLANK: 1550522 Matrix: Water
Associated Lab Samples: 2610645001, 2610645002, 2610645003, 2610645004, 2610645005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.177 ± 0.319 (0.697) C:77% T:91%	pCi/L	11/01/18 12:04	

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
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(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610645

QC Batch: 317859 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610645001, 2610645002, 2610645003, 2610645004

METHOD BLANK: 1550523 Matrix: Water
Associated Lab Samples: 2610645001, 2610645002, 2610645003, 2610645004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.113 ± 0.0985 (0.175) C:98% T:NA	pCi/L	11/06/18 08:10	

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
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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610645

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 Bowen Ash Pond
Pace Project No.: 2610645

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610645001	**BGWC-9**	EPA 9315	317859		
2610645002	**BGWC-12**	EPA 9315	317859		
2610645003	**BGWC-17**	EPA 9315	317859		
2610645004	**FBL 101718**	EPA 9315	317859		
2610645005	**EQBL 101718**	EPA 9315	318192		
2610645001	**BGWC-9**	EPA 9320	317858		
2610645002	**BGWC-12**	EPA 9320	317858		
2610645003	**BGWC-17**	EPA 9320	317858		
2610645004	**FBL 101718**	EPA 9320	317858		
2610645005	**EQBL 101718**	EPA 9320	317858		
2610645001	**BGWC-9**	Total Radium Calculation	319916		
2610645002	**BGWC-12**	Total Radium Calculation	319916		
2610645003	**BGWC-17**	Total Radium Calculation	319916		
2610645004	**FBL 101718**	Total Radium Calculation	319916		
2610645005	**EQBL 101718**	Total Radium Calculation	319920		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Maner Road	Copy To:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List +)	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWC-9	WT	G	10/17/18	1313				4	1		3							X	X	X	X	
2	BGWC-12	WT	G	10/17/18	1600				4	1		3							X	X	X	X	
3	BGWC-17	WT	G	10/17/18	1600				6	1		5							X	X	X	X	
4	BGWC-36D	WT	G	10/17/18	1052				4	1		3							X	X			Hold for App IV
5	FBL 101718	WT	G	10/17/18	1330				4	1		3							X	X	X	X	
6	EQBL101718	WT	G	10/17/18	1334				4	1		3							X	X	X	X	
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO# : 2610645

2610645

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo Only!	Veronica Fay	10/19/18	0944	Mike Nguyen/Pace	10/19/18	0946	
				M2a Lirman	10/19/18	1100	
							1.5

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Veronica Fay, Audrey Crafton

SIGNATURE of SAMPLER: Veronica Fay

DATE Signed: 10-17-18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610645

PM: BM Due Date: 11/16/18

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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/19/18 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: 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

October 26, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610648

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610648

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
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(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610648

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610648001	**BGWA-29**	Water	10/16/18 12:10	10/19/18 11:00
2610648002	**BGWC-8**	Water	10/16/18 15:28	10/19/18 11:00
2610648003	**BGWA-2**	Water	10/16/18 10:19	10/19/18 11:00
2610648004	**BGWA-6**	Water	10/16/18 12:01	10/19/18 11:00
2610648005	**Dup-1**	Water	10/16/18 00:00	10/19/18 11:00
2610648006	**FBL 101618**	Water	10/16/18 16:18	10/19/18 11:00
2610648007	**EQBL 101618**	Water	10/16/18 16:20	10/19/18 11:00

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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610648

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610648001	**BGWA-29**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610648002	**BGWC-8**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610648003	**BGWA-2**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610648004	**BGWA-6**	EPA 6020B	CSW	2
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610648005	**Dup-1**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610648006	**FBL 101618**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
2610648007	**EQBL 101618**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610648

Sample: BGWA-29 **Lab ID: 2610648001** Collected: 10/16/18 12:10 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 23:19	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 23:19	7440-39-3	
Boron	**0.0071J**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 23:19	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 23:19	7440-43-9	
Calcium	**19.4J**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 23:25	7440-70-2	D3
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 23:19	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 23:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 23:19	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 23:19	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**138**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.5**	mg/L	0.25	0.024	1		10/23/18 05:35	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 05:35	16984-48-8	
Sulfate	**7.6**	mg/L	1.0	0.017	1		10/23/18 05:35	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 Bowen Ash Pond
Pace Project No.: 2610648

Sample: BGWC-8 **Lab ID: 2610648002** Collected: 10/16/18 15:28 Received: 10/19/18 11:00 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								
Arsenic	**0.00064J**	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 23:30	7440-38-2	
Barium	**0.034**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 23:30	7440-39-3	
Boron	**0.16**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 23:30	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 23:30	7440-43-9	
Calcium	**44.8**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 23:36	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 23:30	7440-48-4	
Lithium	**0.0010J**	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 23:30	7439-93-2	
Molybdenum	**0.0041J**	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 23:30	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 23:30	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**247**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.6**	mg/L	0.25	0.024	1		10/23/18 05:57	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 05:57	16984-48-8	
Sulfate	**53.0**	mg/L	2.0	0.034	2		10/25/18 01:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610648

Sample: BGWA-2 **Lab ID: 2610648003** Collected: 10/16/18 10:19 Received: 10/19/18 11:00 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								
Arsenic	**0.00075J**	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/23/18 23:42	7440-38-2	
Barium	**0.17**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/23/18 23:42	7440-39-3	
Boron	**0.0066J**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 23:42	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/23/18 23:42	7440-43-9	
Calcium	**34.6**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 23:47	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/23/18 23:42	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/23/18 23:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/23/18 23:42	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/23/18 23:42	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**192**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	0.25	0.024	1		10/23/18 06:20	16887-00-6	
Fluoride	**0.060J**	mg/L	0.30	0.029	1		10/23/18 06:20	16984-48-8	
Sulfate	**8.9**	mg/L	1.0	0.017	1		10/23/18 06:20	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 Bowen Ash Pond
Pace Project No.: 2610648

Sample: BGWA-6 **Lab ID: 2610648004** Collected: 10/16/18 12:01 Received: 10/19/18 11:00 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	**0.0088J**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/23/18 23:53	7440-42-8	
Calcium	**55.6**	mg/L	25.0	0.69	50	10/22/18 13:23	10/23/18 23:59	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**311**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.7**	mg/L	0.25	0.024	1		10/23/18 06:43	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 06:43	16984-48-8	
Sulfate	**32.4**	mg/L	1.0	0.017	1		10/23/18 06:43	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 Bowen Ash Pond
Pace Project No.: 2610648

Sample: Dup-1 **Lab ID: 2610648005** Collected: 10/16/18 00:00 Received: 10/19/18 11:00 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								
Arsenic	**0.00081J**	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/24/18 00:05	7440-38-2	
Barium	**0.17**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/24/18 00:05	7440-39-3	
Boron	**0.0057J**	mg/L	0.040	0.0039	1	10/22/18 13:23	10/24/18 00:05	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/24/18 00:05	7440-43-9	
Calcium	**33.2**	mg/L	25.0	0.69	50	10/22/18 13:23	10/24/18 00:10	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/24/18 00:05	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/24/18 00:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/24/18 00:05	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/24/18 00:05	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**188**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		10/23/18 08:36	16887-00-6	
Fluoride	**0.045J**	mg/L	0.30	0.029	1		10/23/18 08:36	16984-48-8	
Sulfate	**9.1**	mg/L	1.0	0.017	1		10/23/18 08:36	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 Bowen Ash Pond
Pace Project No.: 2610648

Sample: FBL 101618 **Lab ID: 2610648006** Collected: 10/16/18 16:18 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/24/18 00:33	7440-38-2	
Barium	**0.0022J**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/24/18 00:33	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	10/22/18 13:23	10/24/18 00:33	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/24/18 00:33	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	10/22/18 13:23	10/24/18 00:33	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/24/18 00:33	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/24/18 00:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/24/18 00:33	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/24/18 00:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**20.0J**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.16J**	mg/L	0.25	0.024	1		10/23/18 08:58	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 08:58	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/23/18 08:58	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 Bowen Ash Pond
Pace Project No.: 2610648

Sample: EQBL 101618 **Lab ID: 2610648007** Collected: 10/16/18 16:20 Received: 10/19/18 11:00 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/22/18 13:23	10/24/18 00:39	7440-38-2	
Barium	**0.0022J**	mg/L	0.010	0.00078	1	10/22/18 13:23	10/24/18 00:39	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	10/22/18 13:23	10/24/18 00:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/22/18 13:23	10/24/18 00:39	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	10/22/18 13:23	10/24/18 00:39	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/22/18 13:23	10/24/18 00:39	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/22/18 13:23	10/24/18 00:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/22/18 13:23	10/24/18 00:39	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/22/18 13:23	10/24/18 00:39	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**18.0J**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.090J**	mg/L	0.25	0.024	1		10/23/18 09:21	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 09:21	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/23/18 09:21	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 Bowen Ash Pond
Pace Project No.: 2610648

QC Batch: 15773 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2610648001, 2610648002, 2610648003, 2610648004, 2610648005, 2610648006, 2610648007

METHOD BLANK: 70375 Matrix: Water
Associated Lab Samples: 2610648001, 2610648002, 2610648003, 2610648004, 2610648005, 2610648006, 2610648007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	10/23/18 19:58	
Barium	mg/L	ND	0.010	0.00078	10/23/18 19:58	
Boron	mg/L	ND	0.040	0.0039	10/23/18 19:58	
Cadmium	mg/L	ND	0.0010	0.000093	10/23/18 19:58	
Calcium	mg/L	ND	0.50	0.014	10/23/18 19:58	
Cobalt	mg/L	ND	0.010	0.00052	10/23/18 19:58	
Lithium	mg/L	ND	0.050	0.00097	10/23/18 19:58	
Molybdenum	mg/L	ND	0.010	0.0019	10/23/18 19:58	
Thallium	mg/L	ND	0.0010	0.00014	10/23/18 19:58	

LABORATORY CONTROL SAMPLE: 70376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.096	96	80-120	
Barium	mg/L	.1	0.096	96	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Cobalt	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.094	94	80-120	
Thallium	mg/L	.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70377 70378

Parameter	Units	2610644003 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	0.097	0.097	97	97	75-125	0	20	
Barium	mg/L	0.015	.1	.1	0.11	0.11	96	97	75-125	0	20	
Boron	mg/L	1.4	1	1	2.4	2.5	101	109	75-125	3	20	
Cadmium	mg/L	ND	.1	.1	0.096	0.096	96	96	75-125	0	20	
Calcium	mg/L	69.7	1	1	70.1	69.0	39	-72	75-125	2	20	M6
Cobalt	mg/L	ND	.1	.1	0.095	0.095	94	95	75-125	0	20	
Lithium	mg/L	ND	.1	.1	0.096	0.10	96	101	75-125	5	20	
Molybdenum	mg/L	ND	.1	.1	0.097	0.097	97	97	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.092	0.090	92	90	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 Bowen Ash Pond
Pace Project No.: 2610648

QC Batch: 15764 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2610648001, 2610648002, 2610648003, 2610648004, 2610648005, 2610648006, 2610648007

LABORATORY CONTROL SAMPLE: 70356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 70357

Parameter	Units	2610648001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	138	134	3	10	

SAMPLE DUPLICATE: 70370

Parameter	Units	2610673005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	351	344	2	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 Bowen Ash Pond
Pace Project No.: 2610648

QC Batch: 15802 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2610648001, 2610648002, 2610648003, 2610648004, 2610648005, 2610648006, 2610648007

METHOD BLANK: 70443 Matrix: Water
Associated Lab Samples: 2610648001, 2610648002, 2610648003, 2610648004, 2610648005, 2610648006, 2610648007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	10/22/18 21:17	
Fluoride	mg/L	ND	0.30	0.029	10/22/18 21:17	
Sulfate	mg/L	ND	1.0	0.017	10/22/18 21:17	

LABORATORY CONTROL SAMPLE: 70444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70445 70446

Parameter	Units	2610629001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	1.2	10	10	11.3	11.3	101	101	90-110	0	15	
Sulfate	mg/L	10.4	10	10	20.7	20.7	102	103	90-110	0	15	

MATRIX SPIKE SAMPLE: 70447

Parameter	Units	2610640001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.7	10	20.8	91	90-110	
Fluoride	mg/L	0.047J	10	10.1	101	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 Bowen Ash Pond
Pace Project No.: 2610648

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 Bowen Ash Pond
Pace Project No.: 2610648

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610648001	**BGWA-29**	EPA 3005A	15773	EPA 6020B	15799
2610648002	**BGWC-8**	EPA 3005A	15773	EPA 6020B	15799
2610648003	**BGWA-2**	EPA 3005A	15773	EPA 6020B	15799
2610648004	**BGWA-6**	EPA 3005A	15773	EPA 6020B	15799
2610648005	**Dup-1**	EPA 3005A	15773	EPA 6020B	15799
2610648006	**FBL 101618**	EPA 3005A	15773	EPA 6020B	15799
2610648007	**EQBL 101618**	EPA 3005A	15773	EPA 6020B	15799
2610648001	**BGWA-29**	SM 2540C	15764		
2610648002	**BGWC-8**	SM 2540C	15764		
2610648003	**BGWA-2**	SM 2540C	15764		
2610648004	**BGWA-6**	SM 2540C	15764		
2610648005	**Dup-1**	SM 2540C	15764		
2610648006	**FBL 101618**	SM 2540C	15764		
2610648007	**EQBL 101618**	SM 2540C	15764		
2610648001	**BGWA-29**	EPA 300.0	15802		
2610648002	**BGWC-8**	EPA 300.0	15802		
2610648003	**BGWA-2**	EPA 300.0	15802		
2610648004	**BGWA-6**	EPA 300.0	15802		
2610648005	**Dup-1**	EPA 300.0	15802		
2610648006	**FBL 101618**	EPA 300.0	15802		
2610648007	**EQBL 101618**	EPA 300.0	15802		

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:

Company:	Georgia Power - Coal Combustion Residuals
Address:	2480 Maner Road
	Atlanta, GA 30339
Email:	jabraham@southernco.com
Phone: (404)506-7239	Fax:
Requested Due Date:	

Section B — Required Project Information:

Report To:	Joju Abraham
Copy To:	Geosyntec
Purchase Order #:	SCS10348606
Project Name:	Plant Bowen Ash Pond
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Pace Profile #:	315

Regulatory Agency:

State / Location: GA

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	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	Requested Analysis Filtered (Y/N) — Analyses Test: TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)	
1	BGWA-29	WT	G	10/16/18	1210				4	1		3						X	X	X	X		
2	BGWC-8	WT	G	10/16/18	1528				4	1		3						X	X	X	X		
3	BGWA-2	WT	G	10/16/18	1019				4	1		3						X	X	X	X		
4	BGWA-6	WT	G	10/16/18	1201				4	1		3						X	X				Hold for App III
5	Dup-1	WT	G	10/16/18	—				4	1		3						X	X	X	X		
6	FBLK101618	WT	G	10/16/18	1618				4	1		3						X	X	X	X		
7	EQBLK101618	WT	G	10/16/18	1620				4	1		3						X	X	X	X		
8																							
9																							
10																							
11																							
12																							

WO# : 2610648

2610648

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Veronica Fay	10/19/18	0946	Mike Nguyen/Pace	10/19/18	0946	
				M Zahman	10/19/18	1100	
							1.5
							Y
							Y
							Y

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson & Veronica Fay

SIGNATURE of SAMPLER: [signature]

DATE Signed: 10/16/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610648

PM: BM Due Date: 10/26/18

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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/19/18 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: 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

November 12, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

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 Bowen Ash Pond
Pace Project No.: 2610650

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610650001	**BGWA-29**	Water	10/16/18 12:10	10/19/18 11:00
2610650002	**BGWC-8**	Water	10/16/18 15:28	10/19/18 11:00
2610650003	**BGWA-2**	Water	10/16/18 10:19	10/19/18 11:00
2610650004	**Dup-1**	Water	10/16/18 00:00	10/19/18 11:00
2610650005	**FBL 101618**	Water	10/16/18 16:18	10/19/18 11:00
2610650006	**EQBL 101618**	Water	10/16/18 16:20	10/19/18 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610650001	**BGWA-29**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610650002	**BGWC-8**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610650003	**BGWA-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610650004	**Dup-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610650005	**FBL 101618**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610650006	**EQBL 101618**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Sample: BGWA-29 **Lab ID: 2610650001** Collected: 10/16/18 12:10 Received: 10/19/18 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	**0.146 ± 0.0476 (0.0593) C:100% T:NA**	pCi/L	11/06/18 11:52	13982-63-3	
Radium-228	EPA 9320	**-0.0264 ± 0.322 (0.757) C:78% T:88%**	pCi/L	11/01/18 12:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.146 ± 0.370 (0.816)**	pCi/L	11/09/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Sample: BGWC-8 **Lab ID: 2610650002** Collected: 10/16/18 15:28 Received: 10/19/18 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	**0.213 ± 0.0538 (0.0484) C:100% T:NA**	pCi/L	11/06/18 11:52	13982-63-3	
Radium-228	EPA 9320	**0.420 ± 0.337 (0.668) C:78% T:91%**	pCi/L	11/01/18 12:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.633 ± 0.391 (0.716)**	pCi/L	11/09/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Sample: BGWA-2 **Lab ID: 2610650003** Collected: 10/16/18 10:19 Received: 10/19/18 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	**0.424 ± 0.0847 (0.0493) C:96% T:NA**	pCi/L	11/06/18 11:52	13982-63-3	
Radium-228	EPA 9320	**0.146 ± 0.298 (0.657) C:79% T:87%**	pCi/L	11/01/18 12:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.570 ± 0.383 (0.706)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610650

Sample: Dup-1 **Lab ID: 2610650004** Collected: 10/16/18 00:00 Received: 10/19/18 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	**0.338 ± 0.0752 (0.0639) C:100% T:NA**	pCi/L	11/06/18 11:52	13982-63-3	
Radium-228	EPA 9320	**0.122 ± 0.308 (0.687) C:77% T:89%**	pCi/L	11/01/18 12:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.460 ± 0.383 (0.751)**	pCi/L	11/09/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Sample: FBL 101618 **Lab ID: 2610650005** Collected: 10/16/18 16:18 Received: 10/19/18 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	**0.157 ± 0.106 (0.158) C:99% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.634 ± 0.388 (0.719) C:74% T:85%**	pCi/L	11/01/18 12:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.791 ± 0.494 (0.877)**	pCi/L	11/09/18 12:09	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

Sample: EQBL 101618 **Lab ID: 2610650006** Collected: 10/16/18 16:20 Received: 10/19/18 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	**0.144 ± 0.104 (0.163) C:96% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.789 ± 0.442 (0.802) C:68% T:87%**	pCi/L	11/01/18 12:06	15262-20-1	
Total Radium	Total Radium Calculation	**0.933 ± 0.546 (0.965)**	pCi/L	11/09/18 12:09	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 Bowen Ash Pond
Pace Project No.: 2610650

QC Batch: 317858 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2610650001, 2610650002, 2610650003, 2610650004, 2610650005, 2610650006

METHOD BLANK: 1550522 Matrix: Water
Associated Lab Samples: 2610650001, 2610650002, 2610650003, 2610650004, 2610650005, 2610650006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.177 ± 0.319 (0.697) C:77% T:91%	pCi/L	11/01/18 12:04	

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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(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

QC Batch: 317859 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610650001, 2610650002, 2610650003, 2610650004, 2610650005, 2610650006

METHOD BLANK: 1550523 Matrix: Water
Associated Lab Samples: 2610650001, 2610650002, 2610650003, 2610650004, 2610650005, 2610650006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.113 ± 0.0985 (0.175) C:98% T:NA	pCi/L	11/06/18 08:10	

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

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610650

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 Bowen Ash Pond
Pace Project No.: 2610650

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610650001	**BGWA-29**	EPA 9315	317859		
2610650002	**BGWC-8**	EPA 9315	317859		
2610650003	**BGWA-2**	EPA 9315	317859		
2610650004	**Dup-1**	EPA 9315	317859		
2610650005	**FBL 101618**	EPA 9315	317859		
2610650006	**EQBL 101618**	EPA 9315	317859		
2610650001	**BGWA-29**	EPA 9320	317858		
2610650002	**BGWC-8**	EPA 9320	317858		
2610650003	**BGWA-2**	EPA 9320	317858		
2610650004	**Dup-1**	EPA 9320	317858		
2610650005	**FBL 101618**	EPA 9320	317858		
2610650006	**EQBL 101618**	EPA 9320	317858		
2610650001	**BGWA-29**	Total Radium Calculation	319916		
2610650002	**BGWC-8**	Total Radium Calculation	319916		
2610650003	**BGWA-2**	Total Radium Calculation	319916		
2610650004	**Dup-1**	Total Radium Calculation	319916		
2610650005	**FBL 101618**	Total Radium Calculation	319916		
2610650006	**EQBL 101618**	Total Radium Calculation	319916		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Maner Road	Copy To:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	315

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)	
1	BGWA-29	WT	G	10/16/18	1210				4	1		3							X	X	X	X		
2	BGWX-8	WT	G	10/16/18	1578				4	1		3							X	X	X	X		
3	BGWA-2	WT	G	10/16/18	1019				4	1		3							X	X	X	X		
4	BGWA-6	WT	G	10/16/18	1201				4	1		3							X	X				Hold 8a-App III
5	Dup-1	WT	G	10/16/18	—				4	1		3							X	X	X	X		
6	FBL101618	WT	G	10/16/18	1618				4	1		3							X	X	X	X		
7	EQBL101618	WT	G	10/16/18	1620				4	1		3							X	X	X	X		
8																								
9																								
10																								
11																								
12																								

Requested Analysis Filtered (Y/N)

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO# : 2610650

2610650

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Veronica Fay	10/19/18	0946	Mike Ngeyen/Pace	10/19/18	0946	
				M Zahman	10/19/18	1100	
							1.5 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephens JR./Veronica Fay

SIGNATURE of SAMPLER: DATE Signed: 10/16/18

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2610650

PM: BM Due Date: 11/16/18

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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/19/18 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: 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

October 29, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

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
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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610673001	**BGWC-14**	Water	10/19/18 10:50	10/20/18 09:32
2610673002	**BGWC-19**	Water	10/19/18 09:30	10/20/18 09:32
2610673003	**BGWC-21**	Water	10/19/18 12:55	10/20/18 09:32
2610673004	**BGWC-34D**	Water	10/19/18 12:44	10/20/18 09:32
2610673005	**Dup-3**	Water	10/19/18 00:00	10/20/18 09:32
2610673006	**FBL 101918**	Water	10/19/18 13:30	10/20/18 09:32
2610673007	**EQBL 101918**	Water	10/19/18 13:35	10/20/18 09:32

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610673001	**BGWC-14**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610673002	**BGWC-19**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610673003	**BGWC-21**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610673004	**BGWC-34D**	EPA 6020B	CSW	2
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610673005	**Dup-3**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610673006	**FBL 101918**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610673007	**EQBL 101918**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Sample: BGWC-14 **Lab ID: 2610673001** Collected: 10/19/18 10:50 Received: 10/20/18 09:32 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/23/18 12:12	10/23/18 17:53	7440-38-2	
Barium	**0.065**	mg/L	0.010	0.00078	1	10/23/18 12:12	10/23/18 17:53	7440-39-3	
Boron	**0.86**	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 17:53	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/23/18 12:12	10/23/18 17:53	7440-43-9	
Calcium	**111**	mg/L	25.0	0.69	50	10/23/18 12:12	10/23/18 17:58	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/23/18 12:12	10/23/18 17:53	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/23/18 12:12	10/23/18 17:53	7439-93-2	
Molybdenum	**0.0094J**	mg/L	0.010	0.0019	1	10/23/18 12:12	10/23/18 17:53	7439-98-7	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	10/23/18 12:12	10/23/18 17:53	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**642**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**35.1**	mg/L	0.25	0.024	1		10/23/18 16:10	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 16:10	16984-48-8	
Sulfate	**286**	mg/L	10.0	0.17	10		10/29/18 12:13	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 Bowen Ash Pond
Pace Project No.: 2610673

Sample: BGWC-19 **Lab ID: 2610673002** Collected: 10/19/18 09:30 Received: 10/20/18 09:32 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/23/18 12:12	10/23/18 18:04	7440-38-2	
Barium	**0.037**	mg/L	0.010	0.00078	1	10/23/18 12:12	10/23/18 18:04	7440-39-3	
Boron	**0.65**	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 18:04	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/23/18 12:12	10/23/18 18:04	7440-43-9	
Calcium	**63.1**	mg/L	25.0	0.69	50	10/23/18 12:12	10/23/18 18:10	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/23/18 12:12	10/23/18 18:04	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/23/18 12:12	10/23/18 18:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/23/18 12:12	10/23/18 18:04	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/23/18 12:12	10/23/18 18:04	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**321**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**15.3**	mg/L	0.25	0.024	1		10/23/18 17:20	16887-00-6	
Fluoride	**0.17J**	mg/L	0.30	0.029	1		10/23/18 17:20	16984-48-8	
Sulfate	**114**	mg/L	5.0	0.085	5		10/29/18 12:36	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Sample: BGWC-21 **Lab ID: 2610673003** Collected: 10/19/18 12:55 Received: 10/20/18 09:32 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								
Arsenic	**0.00059J**	mg/L	0.0050	0.00057	1	10/23/18 12:12	10/23/18 18:15	7440-38-2	
Barium	**0.038**	mg/L	0.010	0.00078	1	10/23/18 12:12	10/23/18 18:15	7440-39-3	
Boron	**0.028J**	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 18:15	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/23/18 12:12	10/23/18 18:15	7440-43-9	
Calcium	**40.6**	mg/L	25.0	0.69	50	10/23/18 12:12	10/23/18 18:21	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/23/18 12:12	10/23/18 18:15	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/23/18 12:12	10/23/18 18:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/23/18 12:12	10/23/18 18:15	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/23/18 12:12	10/23/18 18:15	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**236**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.1**	mg/L	0.25	0.024	1		10/23/18 17:43	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 17:43	16984-48-8	
Sulfate	**57.2**	mg/L	5.0	0.085	5		10/29/18 12:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Sample: BGWC-34D **Lab ID: 2610673004** Collected: 10/19/18 12:44 Received: 10/20/18 09:32 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								
Boron	**0.19**	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 18:27	7440-42-8	
Calcium	**105**	mg/L	25.0	0.69	50	10/23/18 12:12	10/23/18 18:33	7440-70-2	M6
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**450**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**28.0**	mg/L	0.25	0.024	1		10/23/18 18:06	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 18:06	16984-48-8	
Sulfate	**106**	mg/L	5.0	0.085	5		10/29/18 13:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Sample: Dup-3 **Lab ID: 2610673005** Collected: 10/19/18 00:00 Received: 10/20/18 09:32 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/23/18 12:12	10/23/18 19:18	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	10/23/18 12:12	10/23/18 19:18	7440-39-3	
Boron	**0.65**	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 19:18	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/23/18 12:12	10/23/18 19:18	7440-43-9	
Calcium	**63.0**	mg/L	25.0	0.69	50	10/23/18 12:12	10/23/18 19:24	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/23/18 12:12	10/23/18 19:18	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/23/18 12:12	10/23/18 19:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/23/18 12:12	10/23/18 19:18	7439-98-7	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	10/23/18 12:12	10/23/18 19:18	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**351**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**15.2**	mg/L	0.25	0.024	1		10/23/18 18:29	16887-00-6	
Fluoride	**0.18J**	mg/L	0.30	0.029	1		10/23/18 18:29	16984-48-8	
Sulfate	**113**	mg/L	5.0	0.085	5		10/29/18 13:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Sample: FBL 101918 **Lab ID: 2610673006** Collected: 10/19/18 13:30 Received: 10/20/18 09:32 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/23/18 12:12	10/23/18 19:36	7440-38-2	
Barium	**0.0023J**	mg/L	0.010	0.00078	1	10/23/18 12:12	10/23/18 19:36	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 19:36	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/23/18 12:12	10/23/18 19:36	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	10/23/18 12:12	10/23/18 19:36	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/23/18 12:12	10/23/18 19:36	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/23/18 12:12	10/23/18 19:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/23/18 12:12	10/23/18 19:36	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/23/18 12:12	10/23/18 19:36	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**28.0**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.070J**	mg/L	0.25	0.024	1		10/23/18 18:52	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 18:52	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/23/18 18:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Sample: EQBL 101918 **Lab ID: 2610673007** Collected: 10/19/18 13:35 Received: 10/20/18 09:32 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/23/18 12:12	10/23/18 19:41	7440-38-2	
Barium	**0.0023J**	mg/L	0.010	0.00078	1	10/23/18 12:12	10/23/18 19:41	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	10/23/18 12:12	10/23/18 19:41	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/23/18 12:12	10/23/18 19:41	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	10/23/18 12:12	10/23/18 19:41	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/23/18 12:12	10/23/18 19:41	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/23/18 12:12	10/23/18 19:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/23/18 12:12	10/23/18 19:41	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/23/18 12:12	10/23/18 19:41	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**22.0J**	mg/L	25.0	10.0	1		10/22/18 12:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.068J**	mg/L	0.25	0.024	1		10/23/18 19:16	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 19:16	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/23/18 19:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

QC Batch: 15825 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2610673001, 2610673002, 2610673003, 2610673004, 2610673005, 2610673006, 2610673007

METHOD BLANK: 70549 Matrix: Water
Associated Lab Samples: 2610673001, 2610673002, 2610673003, 2610673004, 2610673005, 2610673006, 2610673007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	10/23/18 17:41	
Barium	mg/L	ND	0.010	0.00078	10/23/18 17:41	
Boron	mg/L	ND	0.040	0.0039	10/23/18 17:41	
Cadmium	mg/L	ND	0.0010	0.000093	10/23/18 17:41	
Calcium	mg/L	ND	0.50	0.014	10/23/18 17:41	
Cobalt	mg/L	ND	0.010	0.00052	10/23/18 17:41	
Lithium	mg/L	ND	0.050	0.00097	10/23/18 17:41	
Molybdenum	mg/L	ND	0.010	0.0019	10/23/18 17:41	
Thallium	mg/L	ND	0.0010	0.00014	10/23/18 17:41	

LABORATORY CONTROL SAMPLE: 70550

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.096	96	80-120	
Barium	mg/L	.1	0.095	95	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	.1	0.095	95	80-120	
Calcium	mg/L	1	0.96	96	80-120	
Cobalt	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	102	80-120	
Molybdenum	mg/L	.1	0.096	96	80-120	
Thallium	mg/L	.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70551 70552

Parameter	Units	2610673004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.013	.1	.1	0.12	0.12	105	103	75-125	2	20	
Barium	mg/L	0.038	.1	.1	0.14	0.14	98	102	75-125	3	20	
Boron	mg/L	0.19	1	1	1.2	1.3	105	111	75-125	4	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	104	75-125	1	20	
Calcium	mg/L	105	1	1	103	105	-159	-32	75-125	1	20	M6
Cobalt	mg/L	0.0011J	.1	.1	0.10	0.10	102	100	75-125	2	20	
Lithium	mg/L	ND	.1	.1	0.11	0.11	106	107	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.11	102	105	75-125	3	20	
Thallium	mg/L	0.00015J	.1	.1	0.096	0.098	96	97	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

QC Batch: 15764 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2610673001, 2610673002, 2610673003, 2610673004, 2610673005, 2610673006, 2610673007

LABORATORY CONTROL SAMPLE: 70356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 70357

Parameter	Units	2610648001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	138	134	3	10	

SAMPLE DUPLICATE: 70370

Parameter	Units	2610673005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	351	344	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

QC Batch: 15803 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2610673001, 2610673002, 2610673003, 2610673004, 2610673005, 2610673006, 2610673007

METHOD BLANK: 70448 Matrix: Water
Associated Lab Samples: 2610673001, 2610673002, 2610673003, 2610673004, 2610673005, 2610673006, 2610673007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.066J	0.25	0.024	10/23/18 15:24	
Fluoride	mg/L	ND	0.30	0.029	10/23/18 15:24	
Sulfate	mg/L	ND	1.0	0.017	10/23/18 15:24	

LABORATORY CONTROL SAMPLE: 70449

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.5	105	90-110	
Sulfate	mg/L	10	10.8	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70450 70451

Parameter	Units	2610673001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	35.1	10	10	41.2	41.3	61	62	90-110	0	15	M1
Fluoride	mg/L	ND	10	10	10.3	10.3	103	103	90-110	0	15	
Sulfate	mg/L	286	10	10	171	171	-1150	-1150	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 70452

Parameter	Units	2610673002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	15.3	10	24.7	93	90-110	
Fluoride	mg/L	0.17J	10	10.7	105	90-110	
Sulfate	mg/L	114	10	92.4	-217	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

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QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

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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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 2610673

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610673001	**BGWC-14**	EPA 3005A	15825	EPA 6020B	15853
2610673002	**BGWC-19**	EPA 3005A	15825	EPA 6020B	15853
2610673003	**BGWC-21**	EPA 3005A	15825	EPA 6020B	15853
2610673004	**BGWC-34D**	EPA 3005A	15825	EPA 6020B	15853
2610673005	**Dup-3**	EPA 3005A	15825	EPA 6020B	15853
2610673006	**FBL 101918**	EPA 3005A	15825	EPA 6020B	15853
2610673007	**EQBL 101918**	EPA 3005A	15825	EPA 6020B	15853
2610673001	**BGWC-14**	SM 2540C	15764		
2610673002	**BGWC-19**	SM 2540C	15764		
2610673003	**BGWC-21**	SM 2540C	15764		
2610673004	**BGWC-34D**	SM 2540C	15764		
2610673005	**Dup-3**	SM 2540C	15764		
2610673006	**FBL 101918**	SM 2540C	15764		
2610673007	**EQBL 101918**	SM 2540C	15764		
2610673001	**BGWC-14**	EPA 300.0	15803		
2610673002	**BGWC-19**	EPA 300.0	15803		
2610673003	**BGWC-21**	EPA 300.0	15803		
2610673004	**BGWC-34D**	EPA 300.0	15803		
2610673005	**Dup-3**	EPA 300.0	15803		
2610673006	**FBL 101918**	EPA 300.0	15803		
2610673007	**EQBL 101918**	EPA 300.0	15803		

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)	
1	BGWC-14	WT	G	10/19/18	1050				4	1		3							X	X	X	X		
2	BGWC-19	WT	G	10/19/18	0930				6	1		5							X	X	X	X		
3	BGWC-21	WT	G	10/19/18	1255				4	1		3							X	X	X	X		
4	BGWC-34D	WT	G	10/19/18	1244				4	1		3							X	X				Hold for App IV
5	DUP-3	WT	G	10/19/18	—				4	1		3							X	X	X	X		
6	FBL 101918	WT	G	10/19/18	1330				4	1		3							X	X	X	X		
7	EQBL 101918	WT	G	10/19/18	1335				4	1		3							X	X	X	X		
8																								
9																								
10																								
11																								
12																								

WO#: 2610673

2610673

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!		10/20/18	0932	MDahman	10/20/18	0932				
							0.6	X	X	X
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Kevin Stephenson, Audrey Crafton	
SIGNATURE of SAMPLER:	Audrey Crafton	DATE Signed: 10/19/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610673

PM: BM Due Date: 10/29/18

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 0.6 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/20/18 MS

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

November 12, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610674

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610674

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 Bowen Ash Pond
Pace Project No.: 2610674

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610674001	**BGWC-14**	Water	10/19/18 10:50	10/20/18 09:32
2610674002	**BGWC-19**	Water	10/19/18 09:30	10/20/18 09:32
2610674003	**BGWC-21**	Water	10/19/18 12:55	10/20/18 09:32
2610674004	**Dup-3**	Water	10/19/18 00:00	10/20/18 09:32
2610674005	**FBL 101918**	Water	10/19/18 13:30	10/20/18 09:32
2610674006	**EQBL 101918**	Water	10/19/18 13:35	10/20/18 09:32

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610674

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610674001	**BGWC-14**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610674002	**BGWC-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610674003	**BGWC-21**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610674004	**Dup-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610674005	**FBL 101918**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610674006	**EQBL 101918**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610674

Sample: BGWC-14 **Lab ID: 2610674001** Collected: 10/19/18 10:50 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**2.10 ± 0.470 (0.253) C:99% T:NA**	pCi/L	11/06/18 09:45	13982-63-3	
Radium-228	EPA 9320	**1.66 ± 0.983 (1.88) C:74% T:84%**	pCi/L	11/01/18 21:03	15262-20-1	
Total Radium	Total Radium Calculation	**3.76 ± 1.45 (2.13)**	pCi/L	11/09/18 13:24	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 Bowen Ash Pond
Pace Project No.: 2610674

Sample: BGWC-19 **Lab ID: 2610674002** Collected: 10/19/18 09:30 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.138 ± 0.126 (0.239) C:95% T:NA**	pCi/L	11/06/18 09:21	13982-63-3	
Radium-228	EPA 9320	**0.646 ± 0.789 (1.68) C:76% T:80%**	pCi/L	11/01/18 21:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.784 ± 0.915 (1.92)**	pCi/L	11/09/18 13:24	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 Bowen Ash Pond
Pace Project No.: 2610674

Sample: BGWC-21 **Lab ID: 2610674003** Collected: 10/19/18 12:55 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.242 ± 0.139 (0.195) C:95% T:NA**	pCi/L	11/06/18 09:45	13982-63-3	
Radium-228	EPA 9320	**0.740 ± 0.833 (1.75) C:71% T:79%**	pCi/L	11/01/18 21:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.982 ± 0.972 (1.95)**	pCi/L	11/09/18 13:24	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 Bowen Ash Pond
Pace Project No.: 2610674

Sample: Dup-3 **Lab ID: 2610674004** Collected: 10/19/18 00:00 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.256 ± 0.141 (0.184) C:97% T:NA**	pCi/L	11/06/18 09:21	13982-63-3	
Radium-228	EPA 9320	**0.286 ± 0.830 (1.85) C:75% T:80%**	pCi/L	11/01/18 21:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.542 ± 0.971 (2.03)**	pCi/L	11/09/18 13:24	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 Bowen Ash Pond
Pace Project No.: 2610674

Sample: FBL 101918 **Lab ID: 2610674005** Collected: 10/19/18 13:30 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.201 ± 0.160 (0.297) C:87% T:NA**	pCi/L	11/06/18 09:21	13982-63-3	
Radium-228	EPA 9320	**-1.64 ± 0.910 (2.26) C:73% T:74%**	pCi/L	11/01/18 21:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.201 ± 1.07 (2.56)**	pCi/L	11/09/18 13:24	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 Bowen Ash Pond
Pace Project No.: 2610674

Sample: EQBL 101918 **Lab ID: 2610674006** Collected: 10/19/18 13:35 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.154 ± 0.122 (0.210) C:96% T:NA**	pCi/L	11/06/18 09:21	13982-63-3	
Radium-228	EPA 9320	**0.572 ± 0.590 (1.22) C:75% T:82%**	pCi/L	11/01/18 19:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.726 ± 0.712 (1.43)**	pCi/L	11/09/18 13:24	7440-14-4	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610674

QC Batch: 318192 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610674001, 2610674002, 2610674003, 2610674004, 2610674005, 2610674006

METHOD BLANK: 1552035 Matrix: Water
Associated Lab Samples: 2610674001, 2610674002, 2610674003, 2610674004, 2610674005, 2610674006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0766 ± 0.110 (0.238) C:97% T:NA	pCi/L	11/06/18 08:09	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610674

QC Batch: 318171 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2610674001, 2610674002, 2610674003, 2610674004, 2610674005, 2610674006

METHOD BLANK: 1551991 Matrix: Water
Associated Lab Samples: 2610674001, 2610674002, 2610674003, 2610674004, 2610674005, 2610674006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.652 ± 0.370 (0.662) C:74% T:87%	pCi/L	11/01/18 16:36	

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 Bowen Ash Pond
Pace Project No.: 2610674

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 Bowen Ash Pond
Pace Project No.: 2610674

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610674001	**BGWC-14**	EPA 9315	318192		
2610674002	**BGWC-19**	EPA 9315	318192		
2610674003	**BGWC-21**	EPA 9315	318192		
2610674004	**Dup-3**	EPA 9315	318192		
2610674005	**FBL 101918**	EPA 9315	318192		
2610674006	**EQBL 101918**	EPA 9315	318192		
2610674001	**BGWC-14**	EPA 9320	318171		
2610674002	**BGWC-19**	EPA 9320	318171		
2610674003	**BGWC-21**	EPA 9320	318171		
2610674004	**Dup-3**	EPA 9320	318171		
2610674005	**FBL 101918**	EPA 9320	318171		
2610674006	**EQBL 101918**	EPA 9320	318171		
2610674001	**BGWC-14**	Total Radium Calculation	319938		
2610674002	**BGWC-19**	Total Radium Calculation	319938		
2610674003	**BGWC-21**	Total Radium Calculation	319938		
2610674004	**Dup-3**	Total Radium Calculation	319938		
2610674005	**FBL 101918**	Total Radium Calculation	319938		
2610674006	**EQBL 101918**	Total Radium Calculation	319938		

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

Regulatory Agency	
State / Location	GA

Requested Analysis Filtered (Y/N)

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	TDS, Cl, F, SO4	Metals 6020 App III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)	
MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS																								
1	BGWC-14	WT	G	10/19/18	1050				4	1		3							X	X	X	X		
2	BGWC-19	WT	G	10/19/18	0930				6	1		5							X	X	X	X		
3	BGWC-21	WT	G	10/19/18	1255				4	1		3							X	X	X	X		
4	BGWC-34D	WT	G	10/19/18	1244				4	1		3							X	X				Hold for App IV
5	DUP-3	WT	G	10/19/18	—				4	1		3							X	X	X	X		
6	FBL 101918	WT	G	10/19/18	1330				4	1		3							X	X	X	X		
7	EQBL 101918	WT	G	10/19/18	1335				4	1		3							X	X	X	X		
8																								
9																								
10																								
11																								
12																								

WO# : 2610674

2610674

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!		10/19/18	0932	MRahman	10/20/18	0932				
							0.6	X	X	X
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Audrey Crafton

SIGNATURE of SAMPLER: Audrey Crafton DATE Signed: 10/19/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 2610674

PM: BM Due Date: 11/19/18

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 0.6 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/20/18 MS

		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

October 30, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

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 Bowen Ash Pond
Pace Project No.: 2610717

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610717001	**BGWC-20**	Water	10/22/18 10:15	10/23/18 12:55
2610717002	**BGWC-22**	Water	10/22/18 14:17	10/23/18 12:55
2610717003	**BGWC-25**	Water	10/22/18 12:55	10/23/18 12:55
2610717004	**BGWC-35D**	Water	10/22/18 16:05	10/23/18 12:55
2610717005	**BGWC-32**	Water	10/22/18 15:00	10/23/18 12:55
2610717006	**BGWC-23**	Water	10/22/18 16:31	10/23/18 12:55
2610717007	**BGWC-30**	Water	10/22/18 11:00	10/23/18 12:55
2610717008	**BGWC-24**	Water	10/22/18 11:24	10/23/18 12:55

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610717001	**BGWC-20**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717002	**BGWC-22**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717003	**BGWC-25**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717004	**BGWC-35D**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717005	**BGWC-32**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717006	**BGWC-23**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717007	**BGWC-30**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610717008	**BGWC-24**	EPA 6020B	CSW	9
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-20 **Lab ID: 2610717001** Collected: 10/22/18 10:15 Received: 10/23/18 12:55 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								
Arsenic	ND	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 13:39	7440-38-2	
Barium	**0.030**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 13:39	7440-39-3	
Boron	**3.6**	mg/L	0.040	0.0039	1	10/24/18 11:05	10/25/18 13:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 13:39	7440-43-9	
Calcium	**241**	mg/L	25.0	0.69	50	10/24/18 11:05	10/25/18 13:45	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 13:39	7440-48-4	
Lithium	**0.016J**	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 13:39	7439-93-2	
Molybdenum	**0.013**	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 13:39	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 13:39	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1150**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**149**	mg/L	2.5	0.24	10		10/24/18 13:45	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 21:49	16984-48-8	
Sulfate	**604**	mg/L	50.0	0.85	50		10/24/18 13:25	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-22 **Lab ID: 2610717002** Collected: 10/22/18 14:17 Received: 10/23/18 12:55 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								
Arsenic	**0.0016J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 13:51	7440-38-2	
Barium	**0.088**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 13:51	7440-39-3	
Boron	**16.1**	mg/L	2.0	0.20	50	10/24/18 11:05	10/25/18 13:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 13:51	7440-43-9	
Calcium	**575**	mg/L	250	6.9	500	10/24/18 11:05	10/26/18 11:19	7440-70-2	
Cobalt	**0.021**	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 13:51	7440-48-4	
Lithium	**0.034J**	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 13:51	7439-93-2	
Molybdenum	**0.055**	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 13:51	7439-98-7	
Thallium	**0.00071J**	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 13:51	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2490**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**827**	mg/L	12.5	1.2	50		10/24/18 14:06	16887-00-6	
Fluoride	**0.78**	mg/L	0.30	0.029	1		10/23/18 22:10	16984-48-8	
Sulfate	**846**	mg/L	50.0	0.85	50		10/24/18 14:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-25 **Lab ID: 2610717003** Collected: 10/22/18 12:55 Received: 10/23/18 12:55 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								
Arsenic	**0.0026J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 14:02	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 14:02	7440-39-3	
Boron	**0.030J**	mg/L	0.040	0.0039	1	10/24/18 11:05	10/25/18 14:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 14:02	7440-43-9	
Calcium	**52.2**	mg/L	25.0	0.69	50	10/24/18 11:05	10/25/18 14:08	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 14:02	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 14:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 14:02	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 14:02	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**218**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.9**	mg/L	0.25	0.024	1		10/23/18 22:31	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/23/18 22:31	16984-48-8	
Sulfate	**8.1**	mg/L	1.0	0.017	1		10/23/18 22:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-35D **Lab ID: 2610717004** Collected: 10/22/18 16:05 Received: 10/23/18 12:55 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								
Arsenic	**0.0019J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 14:13	7440-38-2	
Barium	**0.065**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 14:13	7440-39-3	
Boron	**8.8**	mg/L	0.040	0.0039	1	10/24/18 11:05	10/25/18 14:13	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 14:13	7440-43-9	
Calcium	**384**	mg/L	25.0	0.69	50	10/24/18 11:05	10/25/18 14:19	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 14:13	7440-48-4	
Lithium	**0.011J**	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 14:13	7439-93-2	
Molybdenum	**0.033**	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 14:13	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 14:13	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1810**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**573**	mg/L	12.5	1.2	50		10/24/18 14:27	16887-00-6	
Fluoride	**0.91**	mg/L	0.30	0.029	1		10/23/18 22:51	16984-48-8	
Sulfate	**626**	mg/L	50.0	0.85	50		10/24/18 14:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-32 **Lab ID: 2610717005** Collected: 10/22/18 15:00 Received: 10/23/18 12:55 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								
Arsenic	**0.00076J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 15:06	7440-38-2	
Barium	**0.096**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 15:06	7440-39-3	
Boron	**4.0**	mg/L	0.040	0.0039	1	10/24/18 11:05	10/25/18 15:06	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 15:06	7440-43-9	
Calcium	**234**	mg/L	25.0	0.69	50	10/24/18 11:05	10/25/18 15:12	7440-70-2	M6
Cobalt	**0.0037J**	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 15:06	7440-48-4	
Lithium	ND	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 15:06	7439-93-2	
Molybdenum	**0.0038J**	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 15:06	7439-98-7	
Thallium	**0.00014J**	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 15:06	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1140**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**274**	mg/L	12.5	1.2	50		10/24/18 14:47	16887-00-6	
Fluoride	**0.65**	mg/L	0.30	0.029	1		10/23/18 23:12	16984-48-8	
Sulfate	**350**	mg/L	50.0	0.85	50		10/24/18 14:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-23 **Lab ID: 2610717006** Collected: 10/22/18 16:31 Received: 10/23/18 12:55 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								
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 15:46	7440-38-2	
Barium	**0.087**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 15:46	7440-39-3	
Boron	**9.0**	mg/L	0.040	0.0039	1	10/24/18 11:05	10/25/18 15:46	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 15:46	7440-43-9	
Calcium	**424**	mg/L	25.0	0.69	50	10/24/18 11:05	10/25/18 15:52	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 15:46	7440-48-4	
Lithium	**0.016J**	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 15:46	7439-93-2	
Molybdenum	**0.013**	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 15:46	7439-98-7	
Thallium	ND	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 15:46	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1880**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**639**	mg/L	12.5	1.2	50		10/24/18 15:08	16887-00-6	
Fluoride	**0.81**	mg/L	0.30	0.029	1		10/23/18 23:33	16984-48-8	
Sulfate	**590**	mg/L	50.0	0.85	50		10/24/18 15:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-30 **Lab ID: 2610717007** Collected: 10/22/18 11:00 Received: 10/23/18 12:55 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								
Arsenic	**0.00064J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 16:58	7440-38-2	
Barium	**0.10**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 16:58	7440-39-3	
Boron	**9.5**	mg/L	0.040	0.0039	1	10/24/18 11:05	10/25/18 16:58	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 16:58	7440-43-9	
Calcium	**230**	mg/L	25.0	0.69	50	10/24/18 11:05	10/25/18 17:04	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 16:58	7440-48-4	
Lithium	**0.0050J**	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 16:58	7439-93-2	
Molybdenum	**0.010**	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 16:58	7439-98-7	
Thallium	**0.00034J**	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 16:58	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1070**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**400**	mg/L	2.5	0.24	10		10/24/18 15:29	16887-00-6	
Fluoride	**0.44**	mg/L	0.30	0.029	1		10/23/18 23:53	16984-48-8	
Sulfate	**204**	mg/L	10.0	0.17	10		10/24/18 15:29	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 Bowen Ash Pond
Pace Project No.: 2610717

Sample: BGWC-24 **Lab ID: 2610717008** Collected: 10/22/18 11:24 Received: 10/23/18 12:55 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								
Arsenic	**0.0027J**	mg/L	0.0050	0.00057	1	10/24/18 11:05	10/25/18 17:10	7440-38-2	
Barium	**0.10**	mg/L	0.010	0.00078	1	10/24/18 11:05	10/25/18 17:10	7440-39-3	
Boron	**44.7**	mg/L	2.0	0.20	50	10/24/18 11:05	10/25/18 17:15	7440-42-8	
Cadmium	**0.0053**	mg/L	0.0010	0.000093	1	10/24/18 11:05	10/25/18 17:10	7440-43-9	
Calcium	**1150**	mg/L	250	6.9	500	10/24/18 11:05	10/25/18 17:31	7440-70-2	
Cobalt	**0.0043J**	mg/L	0.010	0.00052	1	10/24/18 11:05	10/25/18 17:10	7440-48-4	
Lithium	**0.0075J**	mg/L	0.050	0.00097	1	10/24/18 11:05	10/25/18 17:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/24/18 11:05	10/25/18 17:10	7439-98-7	
Thallium	**0.00047J**	mg/L	0.0010	0.00014	1	10/24/18 11:05	10/25/18 17:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**4300**	mg/L	25.0	10.0	1		10/24/18 14:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2050**	mg/L	12.5	1.2	50		10/24/18 15:49	16887-00-6	
Fluoride	**3.1**	mg/L	0.30	0.029	1		10/24/18 01:37	16984-48-8	
Sulfate	**723**	mg/L	50.0	0.85	50		10/24/18 15:49	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 Bowen Ash Pond
Pace Project No.: 2610717

QC Batch: 15886 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2610717001, 2610717002, 2610717003, 2610717004, 2610717005, 2610717006, 2610717007, 2610717008

METHOD BLANK: 70786 Matrix: Water
Associated Lab Samples: 2610717001, 2610717002, 2610717003, 2610717004, 2610717005, 2610717006, 2610717007, 2610717008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00057	10/25/18 13:28	
Barium	mg/L	ND	0.010	0.00078	10/25/18 13:28	
Boron	mg/L	ND	0.040	0.0039	10/25/18 13:28	
Cadmium	mg/L	ND	0.0010	0.000093	10/25/18 13:28	
Calcium	mg/L	ND	0.50	0.014	10/25/18 13:28	
Cobalt	mg/L	ND	0.010	0.00052	10/25/18 13:28	
Lithium	mg/L	ND	0.050	0.00097	10/25/18 13:28	
Molybdenum	mg/L	ND	0.010	0.0019	10/25/18 13:28	
Thallium	mg/L	ND	0.0010	0.00014	10/25/18 13:28	

LABORATORY CONTROL SAMPLE: 70787

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.094	94	80-120	
Boron	mg/L	1	1.1	107	80-120	
Cadmium	mg/L	.1	0.098	98	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Cobalt	mg/L	.1	0.097	97	80-120	
Lithium	mg/L	.1	0.10	104	80-120	
Molybdenum	mg/L	.1	0.096	96	80-120	
Thallium	mg/L	.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70788 70789

Parameter	Units	2610717005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.00076J	.1	.1	0.10	0.10	102	102	75-125	0	20	
Barium	mg/L	0.096	.1	.1	0.19	0.19	93	98	75-125	3	20	
Boron	mg/L	4.0	1	1	5.0	5.0	106	101	75-125	1	20	
Cadmium	mg/L	ND	.1	.1	0.097	0.099	97	99	75-125	2	20	
Calcium	mg/L	234	1	1	238	241	417	748	75-125	1	20	M6
Cobalt	mg/L	0.0037J	.1	.1	0.10	0.10	99	99	75-125	0	20	
Lithium	mg/L	ND	.1	.1	0.11	0.11	106	107	75-125	0	20	
Molybdenum	mg/L	0.0038J	.1	.1	0.10	0.11	101	104	75-125	3	20	
Thallium	mg/L	0.00014J	.1	.1	0.094	0.094	94	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 Bowen Ash Pond
Pace Project No.: 2610717

QC Batch: 15895 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2610717001, 2610717002, 2610717003, 2610717004, 2610717005, 2610717006, 2610717007, 2610717008

LABORATORY CONTROL SAMPLE: 70861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 70862

Parameter	Units	2610717001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1150	1140	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 Bowen Ash Pond
Pace Project No.: 2610717

QC Batch: 15861 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2610717001, 2610717002, 2610717003, 2610717004, 2610717005, 2610717006, 2610717007, 2610717008

METHOD BLANK: 70700 Matrix: Water
Associated Lab Samples: 2610717001, 2610717002, 2610717003, 2610717004, 2610717005, 2610717006, 2610717007, 2610717008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	10/23/18 20:06	
Fluoride	mg/L	ND	0.30	0.029	10/23/18 20:06	
Sulfate	mg/L	ND	1.0	0.017	10/23/18 20:06	

LABORATORY CONTROL SAMPLE: 70701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	10.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70702 70703

Parameter	Units	2610729001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	245	500	500	760	761	103	103	90-110	0	15	
Fluoride	mg/L	ND	500	500	492	496	98	99	90-110	1	15	
Sulfate	mg/L	2490	500	500	2700	2700	43	43	90-110	0	15	E,M6

MATRIX SPIKE SAMPLE: 70704

Parameter	Units	2610717001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	149	10	117	-321	90-110	M1
Fluoride	mg/L	ND	10	10.4	104	90-110	
Sulfate	mg/L	604	10	300	-3030	90-110	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 Bowen Ash Pond
Pace Project No.: 2610717

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 Bowen Ash Pond
Pace Project No.: 2610717

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610717001	**BGWC-20**	EPA 3005A	15886	EPA 6020B	15910
2610717002	**BGWC-22**	EPA 3005A	15886	EPA 6020B	15910
2610717003	**BGWC-25**	EPA 3005A	15886	EPA 6020B	15910
2610717004	**BGWC-35D**	EPA 3005A	15886	EPA 6020B	15910
2610717005	**BGWC-32**	EPA 3005A	15886	EPA 6020B	15910
2610717006	**BGWC-23**	EPA 3005A	15886	EPA 6020B	15910
2610717007	**BGWC-30**	EPA 3005A	15886	EPA 6020B	15910
2610717008	**BGWC-24**	EPA 3005A	15886	EPA 6020B	15910
2610717001	**BGWC-20**	SM 2540C	15895		
2610717002	**BGWC-22**	SM 2540C	15895		
2610717003	**BGWC-25**	SM 2540C	15895		
2610717004	**BGWC-35D**	SM 2540C	15895		
2610717005	**BGWC-32**	SM 2540C	15895		
2610717006	**BGWC-23**	SM 2540C	15895		
2610717007	**BGWC-30**	SM 2540C	15895		
2610717008	**BGWC-24**	SM 2540C	15895		
2610717001	**BGWC-20**	EPA 300.0	15861		
2610717002	**BGWC-22**	EPA 300.0	15861		
2610717003	**BGWC-25**	EPA 300.0	15861		
2610717004	**BGWC-35D**	EPA 300.0	15861		
2610717005	**BGWC-32**	EPA 300.0	15861		
2610717006	**BGWC-23**	EPA 300.0	15861		
2610717007	**BGWC-30**	EPA 300.0	15861		
2610717008	**BGWC-24**	EPA 300.0	15861		

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

Regulatory Agency: —

State / Location: GA

Requested Analysis Filtered (Y/N)

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWC-20	WT	G	10/22/18	1015				4	1		3							X	X	X	X	
2	BGWC-22	WT	G	10/22/18	1417				4	1		3							X	X	X	X	
3	BGWC-25	WT	G	10/22/18	1255				4	1		3							X	X	X	X	
4	BGWC-35D	WT	G	10/22/18	1605				4	1		3							X	X	X	X	
5	BGWC-32	WT	G	10/22/18	1500				4	1		3							X	X	X	X	
6	BGWC-23	WT	G	10/22/18	1631				4	1		3							X	X	X	X	
7	BGWC-30	WT	G	10/22/18	1100				4	1		3							X	X	X	X	
8	BGWC-24	WT	G	10/22/18	1124				4	1		3							X	X	X	X	
9																							
10																							
11																							
12																							

WO#: 2610717

2610717

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Audrey Crafton	10/23/18	1027	Mike Nguyen / Pace	10/22/18	1027	
				MZahman	10/23/18	1255	
							0.2 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Robert Mull, Audrey Crafton

SIGNATURE of SAMPLER: Audrey Crafton DATE Signed: 10/22/18

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610717

PM: BM **Due Date: 10/30/18**

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

Cooler Temperature 0.2 **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: 10/23/18 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)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 13, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

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 Bowen Ash Pond
Pace Project No.: 2610718

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610718001	**BGWC-20**	Water	10/22/18 10:15	10/23/18 12:55
2610718002	**BGWC-22**	Water	10/22/18 14:17	10/23/18 12:55
2610718003	**BGWC-25**	Water	10/22/18 12:55	10/23/18 12:55
2610718004	**BGWC-35D**	Water	10/22/18 16:05	10/23/18 12:55
2610718005	**BGWC-32**	Water	10/22/18 15:00	10/23/18 12:55
2610718006	**BGWC-23**	Water	10/22/18 16:31	10/23/18 12:55
2610718007	**BGWC-30**	Water	10/22/18 11:00	10/23/18 12:55
2610718008	**BGWC-24**	Water	10/22/18 11:24	10/23/18 12:55

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610718001	**BGWC-20**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718002	**BGWC-22**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718003	**BGWC-25**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718004	**BGWC-35D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718005	**BGWC-32**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718006	**BGWC-23**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718007	**BGWC-30**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610718008	**BGWC-24**	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 Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-20 **Lab ID: 2610718001** Collected: 10/22/18 10:15 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.362 ± 0.173 (0.217) C:101% T:NA**	pCi/L	11/06/18 09:22	13982-63-3	
Radium-228	EPA 9320	**0.197 ± 0.306 (0.662) C:75% T:89%**	pCi/L	11/01/18 16:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.559 ± 0.479 (0.879)**	pCi/L	11/09/18 12:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-22 **Lab ID: 2610718002** Collected: 10/22/18 14:17 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.861 ± 0.257 (0.184) C:101% T:NA**	pCi/L	11/06/18 09:48	13982-63-3	
Radium-228	EPA 9320	**0.572 ± 0.419 (0.820) C:75% T:86%**	pCi/L	11/01/18 16:37	15262-20-1	
Total Radium	Total Radium Calculation	**1.43 ± 0.676 (1.00)**	pCi/L	11/09/18 12:39	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 Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-25 **Lab ID: 2610718003** Collected: 10/22/18 12:55 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.182 ± 0.118 (0.175) C:97% T:NA**	pCi/L	11/06/18 09:48	13982-63-3	
Radium-228	EPA 9320	**0.559 ± 0.445 (0.891) C:77% T:83%**	pCi/L	11/01/18 16:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.741 ± 0.563 (1.07)**	pCi/L	11/09/18 12:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-35D **Lab ID: 2610718004** Collected: 10/22/18 16:05 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.705 ± 0.229 (0.167) C:102% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.837 ± 0.450 (0.804) C:73% T:85%**	pCi/L	11/01/18 16:37	15262-20-1	
Total Radium	Total Radium Calculation	**1.54 ± 0.679 (0.971)**	pCi/L	11/09/18 12:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-32 **Lab ID: 2610718005** Collected: 10/22/18 15:00 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.794 ± 0.251 (0.195) C:94% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.426 ± 0.658 (1.42) C:74% T:84%**	pCi/L	11/01/18 19:04	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 0.909 (1.62)**	pCi/L	11/09/18 12:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-23 **Lab ID: 2610718006** Collected: 10/22/18 16:31 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.672 ± 0.226 (0.208) C:101% T:NA**	pCi/L	11/06/18 09:55	13982-63-3	
Radium-228	EPA 9320	**0.540 ± 0.380 (0.728) C:75% T:84%**	pCi/L	11/01/18 16:37	15262-20-1	
Total Radium	Total Radium Calculation	**1.21 ± 0.606 (0.936)**	pCi/L	11/09/18 12:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-30 **Lab ID: 2610718007** Collected: 10/22/18 11:00 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.885 ± 0.269 (0.225) C:103% T:NA**	pCi/L	11/06/18 09:48	13982-63-3	
Radium-228	EPA 9320	**0.130 ± 0.364 (0.814) C:75% T:87%**	pCi/L	11/01/18 16:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.633 (1.04)**	pCi/L	11/09/18 12:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Sample: BGWC-24 **Lab ID: 2610718008** Collected: 10/22/18 11:24 Received: 10/23/18 12:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.673 ± 0.224 (0.181) C:97% T:NA**	pCi/L	11/06/18 09:48	13982-63-3	
Radium-228	EPA 9320	**1.51 ± 0.518 (0.727) C:78% T:90%**	pCi/L	11/01/18 16:36	15262-20-1	
Total Radium	Total Radium Calculation	**2.18 ± 0.742 (0.908)**	pCi/L	11/09/18 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 Bowen Ash Pond
Pace Project No.: 2610718

QC Batch: 318192 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2610718001, 2610718002, 2610718003, 2610718004, 2610718005, 2610718006, 2610718007, 2610718008

METHOD BLANK: 1552035 Matrix: Water
Associated Lab Samples: 2610718001, 2610718002, 2610718003, 2610718004, 2610718005, 2610718006, 2610718007, 2610718008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0766 ± 0.110 (0.238) C:97% T:NA	pCi/L	11/06/18 08:09	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

QC Batch: 318171 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2610718001, 2610718002, 2610718003, 2610718004, 2610718005, 2610718006, 2610718007, 2610718008

METHOD BLANK: 1551991 Matrix: Water
Associated Lab Samples: 2610718001, 2610718002, 2610718003, 2610718004, 2610718005, 2610718006, 2610718007, 2610718008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.652 ± 0.370 (0.662) C:74% T:87%	pCi/L	11/01/18 16:36	

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 Bowen Ash Pond
Pace Project No.: 2610718

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
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 2610718

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610718001	**BGWC-20**	EPA 9315	318192		
2610718002	**BGWC-22**	EPA 9315	318192		
2610718003	**BGWC-25**	EPA 9315	318192		
2610718004	**BGWC-35D**	EPA 9315	318192		
2610718005	**BGWC-32**	EPA 9315	318192		
2610718006	**BGWC-23**	EPA 9315	318192		
2610718007	**BGWC-30**	EPA 9315	318192		
2610718008	**BGWC-24**	EPA 9315	318192		
2610718001	**BGWC-20**	EPA 9320	318171		
2610718002	**BGWC-22**	EPA 9320	318171		
2610718003	**BGWC-25**	EPA 9320	318171		
2610718004	**BGWC-35D**	EPA 9320	318171		
2610718005	**BGWC-32**	EPA 9320	318171		
2610718006	**BGWC-23**	EPA 9320	318171		
2610718007	**BGWC-30**	EPA 9320	318171		
2610718008	**BGWC-24**	EPA 9320	318171		
2610718001	**BGWC-20**	Total Radium Calculation	319926		
2610718002	**BGWC-22**	Total Radium Calculation	319926		
2610718003	**BGWC-25**	Total Radium Calculation	319926		
2610718004	**BGWC-35D**	Total Radium Calculation	319926		
2610718005	**BGWC-32**	Total Radium Calculation	319926		
2610718006	**BGWC-23**	Total Radium Calculation	319926		
2610718007	**BGWC-30**	Total Radium Calculation	319926		
2610718008	**BGWC-24**	Total Radium Calculation	319926		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Maner Road	Copy To:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	315

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	TDS, Cl, F, SO4	Metals 6020 App. III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWC-20	WT	G	10/22/18	1015				4	1		3							X	X	X	X	
2	BGWC-22	WT	G	10/22/18	1417				4	1		3							X	X	X	X	
3	BGWC-25	WT	G	10/22/18	1255				4	1		3							X	X	X	X	
4	BGWC-35D	WT	G	10/22/18	1605				4	1		3							X	X	X	X	
5	BGWC-32	WT	G	10/22/18	1500				4	1		3							X	X	X	X	
6	BGWC-23	WT	G	10/22/18	1631				4	1		3							X	X	X	X	
7	BGWC-30	WT	G	10/22/18	1100				4	1		3							X	X	X	X	
8	BGWC-24	WT	G	10/22/18	1124				4	1		3							X	X	X	X	
9																							
10																							
11																							
12																							

WO#: 2610718

2610718

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV Parameters: As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Audrey Crafton	10/23/18	1027	Mike Nguyen/Pace	10/23/18	1027	
				MZahman	10/23/18	1255	
							0.2 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Robert Mull, Audrey Crafton

SIGNATURE of SAMPLER: Audrey Crafton DATE Signed: 10/22/18

TEMP in C | Received Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2610718

PM: BM **Due Date: 11/20/18**

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 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: 10/23/18 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:

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)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 04, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

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 Bowen Ash Pond
Pace Project No.: 2612037

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2612037001	**BGWC-35D**	Water	11/29/18 11:14	11/29/18 13:22

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SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2612037001	**BGWC-35D**	EPA 6020B	KLH	1

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

Sample: BGWC-35D **Lab ID: 2612037001** Collected: 11/29/18 11:14 Received: 11/29/18 13:22 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								
Molybdenum	**0.030**	mg/L	0.010	0.0019	1	12/03/18 11:33	12/03/18 17:31	7439-98-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

QC Batch: 18082
QC Batch Method: EPA 3005A
Associated Lab Samples: 2612037001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 81298 Matrix: Water
Associated Lab Samples: 2612037001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Molybdenum	mg/L	ND	0.010	0.0019	12/03/18 17:20	

LABORATORY CONTROL SAMPLE: 81299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Molybdenum	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 81300 81301

Parameter	Units	2612037001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Molybdenum	mg/L	0.030	.1	.1	0.13	0.13	101	103	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

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

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.

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Bowen Ash Pond
Pace Project No.: 2612037

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2612037001	**BGWC-35D**	EPA 3005A	18082	EPA 6020B	18110

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields m·

WO# : 2612037

2612037

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:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	315

State / Location: GA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	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	Analyses Test: Molybdenum EPA 6010/6020	Residual Chlorine (Y/N)
1	BGWC-35D	WT	G			11/28/18	1114		1			1							1	
2																				
3																				
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)
	Robert Bull	11/29/18	1322	M Rahman	11/29/18	1322				
							0.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Robert Mull

SIGNATURE of SAMPLER: Robert Bull

DATE Signed: 11/29/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2612037

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

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: 11/29/18 MB

			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

January 30, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2613403

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613403

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 Bowen Ash Pond
Pace Project No.: 2613403

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613403001	**BGWC-31**	Water	10/18/18 15:26	10/19/18 11:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2613403

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613403001	**BGWC-31**	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 Bowen Ash Pond
Pace Project No.: 2613403

Sample: BGWC-31 **Lab ID: 2613403001** Collected: 10/18/18 15:26 Received: 10/19/18 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	**0.751 ± 0.165 (0.120) C:96% T:NA**	pCi/L	01/17/19 19:37	13982-63-3	
Radium-228	EPA 9320	**0.209 ± 0.332 (0.719) C:80% T:84%**	pCi/L	01/22/19 12:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.960 ± 0.497 (0.839)**	pCi/L	01/23/19 13:48	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 Bowen Ash Pond
Pace Project No.: 2613403

QC Batch: 327119 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613403001

METHOD BLANK: 1592677 Matrix: Water
Associated Lab Samples: 2613403001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.211 ± 0.302 (0.649) C:78% T:84%	pCi/L	01/22/19 12:42	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2613403

QC Batch: 327111 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613403001

METHOD BLANK: 1592667 Matrix: Water
Associated Lab Samples: 2613403001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.316 ± 0.0983 (0.108) C:99% T:NA	pCi/L	01/17/19 19:37	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613403

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 Bowen Ash Pond
Pace Project No.: 2613403

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613403001	**BGWC-31**	EPA 9315	327111		
2613403001	**BGWC-31**	EPA 9320	327119		
2613403001	**BGWC-31**	Total Radium Calculation	327852		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	
Address:	2480 Maner Road	Copy To:	Geosyntec	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	315

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	Requested Analysis Filtered (Y/N): Y/N	Analyses Test: TDS, Cl, F, SO4	Metals 6020 App III	Metals 6020 App IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWC-7	WT	G	10/18/18	0951				4	1		3							X	X	X	X	
2	BGWC-10	WT	G	10/18/18	1205				4	1		3							X	X	X	X	
3	BGWC-16	WT	G	10/18/18	1355				6	1		5							X	X	X	X	
4	BGWC-18	WT	G	10/18/18	1536				4	1		3							X	X	X	X	
5	BGWC-31	WT	G	10/18/18	1526				4	1		3							X	X			
6	DUP-2	WT	G	10/18/18	—				4	1		3							X	X	X	X	Hold for App IV
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO#: 2613403

2613403

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
App IV Parameters As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Veronica Tay	10/19/18	0946	Mike Wagner/Pace	10/19/18	0946
				MRahman	10/19/18	1100

SAMPLE CONDITIONS				
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
1.5	Y	Y	Y	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Audrey Crafton

SIGNATURE of SAMPLER: Audrey Crafton

DATE Signed: 10-18-18

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 2613403

PM: BM **Due Date: 11/16/18**

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 1.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/19/18 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).

FA-L-200rev.3, 11September2006

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

January 30, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2613404

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613404

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 Bowen Ash Pond
Pace Project No.: 2613404

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613404001	**BGWC-34D**	Water	10/19/18 12:44	10/20/18 09:32

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2613404

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613404001	**BGWC-34D**	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 Bowen Ash Pond
Pace Project No.: 2613404

Sample: BGWC-34D **Lab ID: 2613404001** Collected: 10/19/18 12:44 Received: 10/20/18 09:32 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.45 ± 0.269 (0.120) C:94% T:NA**	pCi/L	01/17/19 19:37	13982-63-3	
Radium-228	EPA 9320	**0.826 ± 0.377 (0.637) C:78% T:94%**	pCi/L	01/22/19 12:42	15262-20-1	
Total Radium	Total Radium Calculation	**2.28 ± 0.646 (0.757)**	pCi/L	01/23/19 13:48	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 Bowen Ash Pond
Pace Project No.: 2613404

QC Batch: 327119 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613404001

METHOD BLANK: 1592677 Matrix: Water
Associated Lab Samples: 2613404001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.211 ± 0.302 (0.649) C:78% T:84%	pCi/L	01/22/19 12:42	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2613404

QC Batch: 327111 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613404001

METHOD BLANK: 1592667 Matrix: Water
Associated Lab Samples: 2613404001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.316 ± 0.0983 (0.108) C:99% T:NA	pCi/L	01/17/19 19:37	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613404

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 Bowen Ash Pond
Pace Project No.: 2613404

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613404001	**BGWC-34D**	EPA 9315	327111		
2613404001	**BGWC-34D**	EPA 9320	327119		
2613404001	**BGWC-34D**	Total Radium Calculation	327852		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : | Of |

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	Geosyntec	Company Name	
	Atlanta, GA 30339			Address	
Email	jabraham@southernco.com	Purchase Order #	SCS10340606	Pace Quote	
Phone	(404)506-7239 Fax	Project Name	Plant Bowen Ash Pond	Pace Project Manager	betsy.mcdaniel@pacelabs.com
Requested Due Date		Project #		Pace Profile #	315

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	TDS, Cl, F, SO4	Metals 6020 App III	Metals 6020 App IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWC-14	WT	G	10/19/18	1050				4	1		3							X	X	X	X	
2	BGWC-19	WT	G	10/19/18	0930				6	1		5							X	X	X	X	
3	BGWC-21	WT	G	10/19/18	1255				4	1		3							X	X	X	X	
4	BGWC-34D	WT	G	10/19/18	1244				4	1		3							X	X			Hold for App IV
5	DUP-3	WT	G	10/19/18	—				4	1		3							X	X	X	X	
6	FBL 101918	WT	G	10/19/18	1330				4	1		3							X	X	X	X	
7	EQBL 101918	WT	G	10/19/18	1335				4	1		3							X	X	X	X	
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

WO#: 2613404

2613404

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
IV Parameters As, Ba, Cd, Co, Li, Tl, Mo ONLY*		10/19/18	0932		10/20/18	0932	

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
0.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Audrey Crafton

SIGNATURE of SAMPLER: Audrey Crafton DATE Signed: 10/19/18

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 2613404

PM: BM **Due Date: 11/19/18**

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 0.6 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/20/18 MM

				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. (e.g. 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 30, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2613405

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613405

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 Bowen Ash Pond
Pace Project No.: 2613405

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613405001	**BGWC-36D**	Water	10/17/18 10:52	10/19/18 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2613405

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613405001	**BGWC-36D**	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 Bowen Ash Pond
Pace Project No.: 2613405

Sample: BGWC-36D **Lab ID: 2613405001** Collected: 10/17/18 10:52 Received: 10/19/18 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	**0.576 ± 0.142 (0.128) C:100% T:NA**	pCi/L	01/17/19 17:20	13982-63-3	
Radium-228	EPA 9320	**0.666 ± 0.372 (0.686) C:74% T:100%**	pCi/L	01/22/19 12:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.24 ± 0.514 (0.814)**	pCi/L	01/23/19 13:48	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 Bowen Ash Pond
Pace Project No.: 2613405

QC Batch: 327119 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613405001

METHOD BLANK: 1592677 Matrix: Water
Associated Lab Samples: 2613405001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.211 ± 0.302 (0.649) C:78% T:84%	pCi/L	01/22/19 12:42	

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2613405

QC Batch: 327111 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613405001

METHOD BLANK: 1592667 Matrix: Water
Associated Lab Samples: 2613405001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.316 ± 0.0983 (0.108) C:99% T:NA	pCi/L	01/17/19 19:37	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613405

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 Bowen Ash Pond
Pace Project No.: 2613405

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613405001	**BGWC-36D**	EPA 9315	327111		
2613405001	**BGWC-36D**	EPA 9320	327119		
2613405001	**BGWC-36D**	Total Radium Calculation	327852		

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:

Company	Georgia Power - Coal Combustion Residuals
Address	2480 Maner Road
	Atlanta, GA 30339
Email	jabraham@southernco.com
Phone	(404)506-7239 Fax
Requested Due Date	

Section B
Required Project Information:

Report To	Joju Abraham
Copy To	Geosyntec
Purchase Order #	SCS10348606
Project Name	Plant Bowen Ash Pond
Project #	

Section C
Invoice Information:

Attention	
Company Name	
Address	
Pace Quote	
Pace Project Manager	betsy mcdaniel@pacelabs.com,
Pace Profile #	315

Regulatory Agency	
State / Location	GA

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS, Cl, F, SO4	Metals 6020 App III	Metals 6020 App. IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)	
1	BGWC-9	WT	G	10/17/18	1313				4	1		3							X	X	X	X		
2	BGWC-12	WT	G	10/17/18	1600				4	1		3							X	X	X	X		
3	BGWC-17	WT	G	10/17/18	1600				6	1		5							X	X	X	X		
4	BGWC-36D	WT	G	10/17/18	1052				4	1		3							X	X				Hold for App IV
5	FBL 101718	WT	G	10/17/18	1330				4	1		3							X	X	X	X		
6	EQBL101718	WT	G	10/17/18	1334				4	1		3							X	X	X	X		
7																								
8																								
9																								
10																								
11																								
12																								

WO#: 2613405
2613405

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
App IV Parameters As, Ba, Cd, Co, Li, Tl, Mo Only!	Veronica Fay	10/19/18	0944	Mike Nguyen/Pace	10/19/18	0946				
				M. Dalliman	10/19/18	1100				
							1.5	Y	Y	Y
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kevin Stephenson, Veronica Fay, Audrey Crutton

SIGNATURE of SAMPLER: Veronica Fay

DATE Signed: 10-17-18

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2613405

PM: BM **Due Date: 11/16/18**

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 1.5 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/19/18 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: -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)

F-ALL-C003rev.3, 11September2006

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

January 30, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Bowen Ash Pond
Pace Project No.: 2613406

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 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: Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Maria Padilla, Georgia Power
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613406

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 Bowen Ash Pond
Pace Project No.: 2613406

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2613406001	**BGWA-6**	Water	10/16/18 12:01	10/19/18 11:00

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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Bowen Ash Pond
Pace Project No.: 2613406

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2613406001	**BGWA-6**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2613406

Sample: BGWA-6 **Lab ID: 2613406001** Collected: 10/16/18 12:01 Received: 10/19/18 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	**0.460 ± 0.254 (0.350) C:98% T:NA**	pCi/L	01/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	**0.421 ± 0.363 (0.736) C:77% T:86%**	pCi/L	01/22/19 12:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.881 ± 0.617 (1.09)**	pCi/L	01/23/19 13:48	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 Bowen Ash Pond
Pace Project No.: 2613406

QC Batch: 327119 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2613406001

METHOD BLANK: 1592677 Matrix: Water
Associated Lab Samples: 2613406001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.211 ± 0.302 (0.649) C:78% T:84%	pCi/L	01/22/19 12:42	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Bowen Ash Pond
Pace Project No.: 2613406

QC Batch: 327111 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2613406001

METHOD BLANK: 1592667 Matrix: Water
Associated Lab Samples: 2613406001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.316 ± 0.0983 (0.108) C:99% T:NA	pCi/L	01/17/19 19:37	

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

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Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Bowen Ash Pond
Pace Project No.: 2613406

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 Bowen Ash Pond
Pace Project No.: 2613406

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2613406001	**BGWA-6**	EPA 9315	327111		
2613406001	**BGWA-6**	EPA 9320	327119		
2613406001	**BGWA-6**	Total Radium Calculation	327852		

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 Atlanta, GA 30339	Copy To	Geosyntec	Company Name	
				Address	
Email	jabraham@southernco.com	Purchase Order #	SCS10348606	Pace Quote	
Phone	(404)506-7239 Fax	Project Name	Plant Bowen Ash Pond	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date		Project #		Pace Profile #	315

Regulatory Agency

State / Location: GA

Requested Analysis Filtered (Y/N)

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	TDS, Cl, F, SO4	Metals 6020 App III	Metals 6020 App IV (See List)	Radium 226, 228	Residual Chlorine (Y/N)
1	BGWA-29	WT	G	10/16/18	1210				4	1		3							X	X	X	X	
2	BGWC-8	WT	G	10/16/18	1528				4	1		3							X	X	X	X	
3	BGWA-2	WT	G	10/16/18	1019				4	1		3							X	X	X	X	
4	BGWA-6	WT	G	10/16/18	1201				4	1		3							X	X			Hold for App III
5	Dup-1	WT	G	10/16/18	—				4	1		3							X	X	X	X	
6	FB1_101618	WT	G	10/16/18	1618				4	1		3							X	X	X	X	
7	EQBK1_101618	WT	G	10/16/18	1620				4	1		3							X	X	X	X	
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO#: 2613406

2613406

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App IV Parameters As, Ba, Cd, Co, Li, Tl, Mo ONLY!	Veronica Fay	10/19/18	0946	Minh Nguyen/Pace	10/19/18	0946	
				M2a Chman	10/19/18	1100	
							1.5 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kenyon Stephenson Veronica Fay

SIGNATURE of SAMPLER: [signature] DATE Signed: 10/16/18

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2613406

PM: BM **Due Date: 11/16/18**

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 1.5 **Biological Tissue is Frozen:** Yes No

Date and Initials of person examining contents: 10/19/18 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:		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).

FrALL-000 Rev. 3, 11 September2006

Data Validation Reports

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date: September 13, 2018

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validations - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 263269, 263436, 263437 and 263438

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of nineteen aqueous samples, two field duplicate samples, two equipment blanks and two field blanks, collected 26-29 March 2018, as part of the Plant Bowen Ash Pond on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by EPA Methods 3005A/6020B
- Mercury by EPA Method 7470A
- Fluoride by EPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by EPA Method 9315
- Radium-228 by EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

The samples were handled, prepared and measured in the same manner under similar prescribed conditions.

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives. The qualified data should be used within the limitations of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001);
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012); and,
- Southern Company Services, Inc., Standard Operating Procedure (hereafter referred to as the SOP) for Level 2A Verification of Coal Combustion Residuals Data, Environmental Testing Laboratory Program, Draft, November 21, 2017, Revision 0, Prepared by Environmental Standards, Inc., Valley Forge, Pennsylvania.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
263269001	BGWA-2
263269002	BGWA-2
263269003	BGWC-8
263269004	BGWC-8
263269005	BGWA-29
263269006	BGWA-29
263269007	BGWC-30
263269008	BGWC-30
263269009	FBL032618
263269010	FBL032618
263269011	EQBL032618
263269012	EQBL032618
263436001	BGWC-7
263436002	BGWC-7
263436003	BGWC-10
263436004	BGWC-10
263436005	BGWC-16
263436006	BGWC-16
263436007	BGWC-19
263436008	BGWC-19

Laboratory ID	Client ID
263436009	BGWC-18
263436010	BGWC-18
263436011	BGWC-17
263436012	BGWC-17
263436013	BGWC-9
263436014	BGWC-9
263436015	Dup-1
263436016	Dup-1
263436017	FBL032718
263436018	FBL032718
263436019	EQBL032718
263436020	EQBL032718
263437001	BGWC-20
263437002	BGWC-20
263437003	BGWC-21
263437004	BGWC-21
263437005	BGWC-12
263437006	BGWC-12
263437007	BGWC-25
263437008	BGWC-25

Laboratory ID	Client ID
263437009	Dup-2
263437010	Dup-2
263438001	BGWC-23
263438002	BGWC-23
263438003	BGWC-14

Laboratory ID	Client ID
263438004	BGWC-14
263438005	BGWC-24
263438006	BGWC-24
263438007	BGWC-22
263438008	BGWC-22

The samples were received within 0-6ºC. No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- Project numbers 263436 and 263437: There were no times of collection listed on the COCs for the field duplicates, Dup-1 and Dup-2. The laboratory assigned collection times of 00:00.
- Project number 263269: The relinquishing signature, date and time were missing for the second sample transfer.
- Project numbers 263436, 263437 and 263438: The relinquishing signatures, dates and times were missing for the both sample transfers.

Each sample was logged in with two laboratory identifications (IDs); an ID for the metals, mercury, fluoride and TDS analyses and an ID for the radiochemistry (radium-226, radium-228 and total radium) analyses.

1.0 METALS

The samples were analyzed by EPA methods 3005A/6020B (Mercury evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
✓ Field Blank

✓ Field Duplicate
✓ Sensitivity
⊗ Electronic Data Deliverables Review

1.1 Overall Assessment

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

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 3319, 3540 and 3569). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Arsenic was detected in the method blank in batch 3319 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated arsenic concentrations in the associated samples were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWA-2	Arsenic	0.0019	J	0.0019	U*	BL
BGWC-8	Arsenic	0.00090	J	0.00090	U*	BL
BGWA-29	Arsenic	0.00066	J	0.00066	U*	BL
BGWC-30	Arsenic	0.0015	J	0.0015	U*	BL

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample BGWC-20. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria.

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

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL032618 and EQBL032718. Metals were not detected in the equipment blanks above the MDLs.

1.7 Field Blank

Two field blanks were collected with the sample sets, FBL032618 and FBL032718. Metals were not detected in the field blanks above the MDLs.

1.8 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWC-16 and BGWC-20, respectively.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverables (EDDs) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The

laboratory flags B and D3 used in the level II reports were not included in the EDDs. No other discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by EPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

2.1 Overall Assessment

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

2.2 Holding Time

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

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 3394, 3612 and 3611). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples BGWA-2 and BGWC-7. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL032618 and EQBL032718. Mercury was not detected in the equipment blanks above the MDL.

2.7 Field Blank

Two field blanks were collected with the sample sets, FBL032618 and FBL032718. Mercury was not detected in the field blanks above the MDL.

2.8 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWC-16 and BGWC-20, respectively.

2.9 Sensitivity

The samples were reported to the MDLs. No elevated nondetect results were reported.

2.10 Electronic Data Deliverables Review

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

3.0 FLUORIDE

The samples were analyzed for fluoride by EPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

3.1 Overall Assessment

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

3.2 Holding Times

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

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the fluoride (batches 3334 and 3696). Fluoride was not detected in the method blanks above the MDL.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample BGWC-7, and one sample set specific MS was reported, using sample BGWC-10. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

One batch MS and one batch MS/MSD pair were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for TDS, using sample HGWA-3. The RPD result was within the laboratory and SOP specified acceptance criteria.

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

3.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL032618 and EQBL032718. Fluoride was not detected in the equipment blanks above the MDL.

3.8 Field Blank

Two field blanks were collected with the sample sets, FBL032618 and FBL032718. Fluoride was not detected in the field blanks above the MDL.

3.9 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWC-16 and BGWC-20, respectively.

3.10 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

3.11 Electronic Data Deliverables Review

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

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by EPA method 9315, radium-228 by EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

4.1 Overall Assessment

The radium-226 and radium-228 data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-228 data (batches 293334, 293707 and 293659). Three method blanks were reported for the radium-226 data (batches 293407, 293706 and 293681). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs and one LCS/LCS duplicate (LCSD) pair were reported for radium-226. One LCS and two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory and SOP specified acceptance criteria.

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for radium-226 and one batch laboratory duplicate was reported for radium-228. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory and SOP specified acceptance criteria.

4.8 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL032618 and EQBL032718. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs, with the following exception.

Radium-226 was detected above the MDC in EQBL032618. Therefore, the radium-226 concentrations greater than the MDC and with a normalized absolute difference (NAD) less than 2.58 were U* qualified as not detected at the reported concentration in the associated samples. Also, the total radium concentration for sample BGWC-30 was U* qualified as not detected at the reported concentration since the concentration of radium-226 in sample BGWC-30 was U* qualified as not detected at the reported concentration and the concentration of radium-228 in sample HGWC-12 was less than the MDC.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWA-2	Radium-226	0.529	NA	0.529	U*	BE
BGWC-8	Radium-226	0.303	NA	0.303	U*	BE
BGWC-30	Radium-226	1.18	NA	1.18	U*	BE
BGWC-30	Total Radium	1.61	NA	1.61	U*	BE

pCi/L-picocuries per liter
NA-not applicable

4.9 Field Blank

Two field blanks were collected with the sample sets, FBL032618 and FBL032718. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs.

4.10 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicates and the original samples BGWC-16 and BGWC-20, respectively.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect results were reported.

4.12 Electronic Data Deliverables Review

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

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team per the SOP

DATA QUALIFIER DEFINITIONS

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.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team per the SOP

Reason Code	Explanation
BL	Laboratory blank contamination. The result should be considered "not-detected."
L	LCS and LCSD recoveries outside acceptance limits, indeterminate bias
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
L+	LCS and/or LCSD 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.

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date: September 13, 2018

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validations - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 266146, 266147, 266149 and 266151

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of nineteen aqueous samples, two field duplicate samples, two equipment blanks and two field blanks, collected 12-15 June 2018, as part of the Plant Bowen Ash Pond on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by EPA Methods 3005A/6020B
- Anions by EPA Method 300.0
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by EPA Method 9315
- Radium-228 by EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives. The qualified data should be used within the limitations of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001);
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012); and,
- Southern Company Services, Inc., Standard Operating Procedure (hereafter referred to as the SOP) for Level 2A Verification of Coal Combustion Residuals Data, Environmental Testing Laboratory Program, Draft, November 21, 2017, Revision 0, Prepared by Environmental Standards, Inc., Valley Forge, Pennsylvania.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
266146001	BGWC-7
266146002	BGWC-24
266146003	BGWC-23
266147001	BGWA-29
266147002	BGWC-9
266147003	BGWA-2
266147004	BGWC-8
266147005	BGWC-16
266147006	Dup-1
266147007	FBL061218
266147008	EQBL061218
266149001	BGWC-22
266149002	BGWC-12

Laboratory ID	Client ID
266149003	BGWC-10
266149004	BGWC-21
266149005	BGWC-17
266149006	BGWC-18
266149007	BGWC-25
266149008	FBL061418
266149009	EQBL061418
266149010	Dup-2
266151001	BGWC-20
266151002	BGWC-14
266151003	BGWC-30
266151004	BGWC-19

The samples were received within 0-6ºC. No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- Project numbers 266147 and 266149: There were no times of collection listed on the COCs for the field duplicates, Dup-1 and Dup-2. The laboratory assigned collection times of 00:00.
- Project numbers 266146, 266147 and 266149: The relinquishing signatures, dates and times were missing for the second sample transfers.

Laboratory reports 266146 and 266149 were revised on September 13, 2018 to add missing holding time qualifications to the anion data.

1.0 METALS

The samples were analyzed by EPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

1.1 Overall Assessment

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

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 8374, 8493

and 8657). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample BGWC-20. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of calcium in the MS/MSD pair using sample BGWC-20 were low and outside the laboratory specified acceptance criteria. However, since the sample concentration was greater than four times the spike concentration, no qualifications were applied to the data, based on professional and technical judgment.

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

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL061218 and EQBL061418. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Calcium was detected in EQBL061218 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since the calcium concentration in EQBL061218 was U qualified based on field blank contamination (Section 1.7), no additional qualifications were applied to the data, based on professional and technical judgment.

Calcium was detected in EQBL061418 at an estimated concentration greater than the MDL and less than the RL. Since the calcium concentrations in the associated samples were greater than five times the equipment blank concentration, no qualifications were applied to the data.

1.7 Field Blank

Two field blanks were collected with the sample sets, FBL061218 and FBL061418. Metals were not detected in the field blanks above the MDLs, with the following exception.

Calcium was detected in FBL061218 at an estimated concentration greater than the MDL and less than the RL. Therefore, the calcium concentration in the associated sample less than five times the field blank concentration was U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
EQBL061218	Calcium	0.023	J	0.023	U*	BF

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.8 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWA-29 and BGWA-22, respectively.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverables (EDDs) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The laboratory flags D3 and M6 used in the level II reports were not included in the EDDs. No other discrepancies were identified between the level II reports and the EDDs.

2.0 WET CHEMISTRY

The samples were analyzed for anions by EPA method 300.0 and TDS by Standard Method 2540C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

2.1 Overall Assessment

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

2.2 Holding Times

The holding time for the anion analysis of a water sample is 28 days from sample collection to analysis. The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding times were met for the sample analyses, with the following exceptions.

The chloride and sulfate analyses of samples BGWC-24, BGWC-23, Dup-2 and BGWC-30 and the sulfate analyses of samples BGWC-12, BGWC-20, BGWC-14 and BGWC-19 were performed outside the holding time. Therefore, the concentrations of these analytes in these samples were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-24	Chloride	1880	H5	1880	J	H

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-24	Sulfate	689	H5	689	J	H
BGWC-23	Chloride	598	H5	598	J	H
BGWC-23	Sulfate	586	H5	586	J	H
BGWC-12	Sulfate	275	H5	275	J	H
Dup-2	Chloride	731	H5	731	J	H
Dup-2	Sulfate	758	H5	758	J	H
BGWC-20	Sulfate	541	NA	541	J	H
BGWC-14	Sulfate	248	NA	248	J	H
BGWC-30	Chloride	390	H5 M1	390	J	H
BGWC-30	Sulfate	174	H5 M1	174	J	H
BGWC-19	Sulfate	78.3	H5	78.3	J	H

mg/L- milligram per liter
H5-laboratory flag indicating the reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
M1-laboratory flag indicating matrix spike recovery exceeded QC limits. Batch accepted based on LCS recovery
NA- not applicable

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the anions (batches 8816, 8908, 9362 and 9363). The wet chemistry parameters were not detected in the method blanks above the MDLs, with the following exception.

Chloride was detected above the RL in the method blanks in batches 8816 (0.42 mg/L), 8908 (0.31 mg/L) and 9362 (0.41 mg/L) 9363 (0.29 mg/L). Therefore, the chloride concentrations less than five times the method blank concentration were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
FBL061218	Chloride	0.32	B	0.32	U*	BL
EQBL061218	Chloride	0.32	B	0.32	U*	BL
FBL061418	Chloride	0.36	B	0.36	U*	BL
EQBL061418	Chloride	0.44	B	0.44	U*	BL

mg/L- milligram per liter
B-laboratory flag indicating analyte was detected in the associated method blank

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample BGWC-30. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of chloride and sulfate were low and outside the laboratory and SOP specified acceptance criteria. However, based on the difference between the sample and spike concentrations, the MS/MSD concentrations exceeding the calibration ranges, and professional and technical judgment, no qualifications were applied to the data.

Three batch MSs and three batch MS/MSD pairs were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

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

2.6 Laboratory Duplicate

Four sample set specific laboratory duplicates were reported for TDS, using samples BGWA-29, BGWC-20, Dup-2 and BGWC-19. The RPD result was within the laboratory and SOP specified acceptance criteria.

One batch laboratory duplicate was also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL061218 and EQBL061418. The wet chemistry parameters were not detected in the equipment blanks above the MDLs, with the following exceptions.

TDS and sulfate were detected at estimated concentrations greater than the MDLs and less than the RLs and chloride (0.32 mg/L) was detected above the RL in EQBL061218. Since the chloride concentration in EQBL061218 was U* qualified based on method blank contamination

and the TDS and sulfate concentrations in EQBL061218 were U* qualified based on field blank contamination no additional qualifications were applied to the data, based on professional and technical judgment.

TDS was detected at an estimated concentration greater than the MDL and less than the RL and chloride (0.44 mg/L) was detected above the RL in EQBL061418. Since the chloride concentration in EQBL061418 was U* qualified based on method blank contamination and the TDS concentration in EQBL061418 were U* qualified based on field blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

2.8 Field Blank

Two field blanks were collected with the sample sets, FBL061218 and FBL061418. The wet chemistry parameters were not detected in the field blanks above the MDLs, with the following exceptions.

TDS and sulfate were detected at estimated concentrations greater than the MDLs and less than the RLs and chloride (0.32 mg/L) was detected above the RL in FBL061218. Since the chloride concentration in FBL061218 was U* qualified based on method blank contamination, no additional qualifications were applied to the chloride data, based on professional and technical judgment. However, the TDS and sulfate concentrations in the associated sample less than five time the field blank concentrations were U qualified as not detected at the reported concentrations.

TDS was detected at an estimated concentration greater than the MDL and less than the RL and chloride (0.36 mg/L) was detected above the RL in FBL061418. Since the chloride concentration in FBL061418 was U* qualified based on method blank contamination, no additional qualifications were applied to the chloride data, based on professional and technical judgment. However, the TDS concentration in the associated samples less than five times the field blank concentration were U qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
EQBL061218	Sulfate	0.12	J	0.12	U*	BF
EQBL061218	TDS	20.0	J	20.0	U*	BF
EQBL061418	TDS	13.0	J	13.0	U*	BF

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL

2.9 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWA-29 and BGWA-22, respectively.

2.10 Sensitivity

The samples were reported to the MDLs. No elevated nondetect results were reported.

2.11 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The laboratory flags M1, H5 and B used in the level II reports were not included in the EDDs. No other discrepancies were identified between the level II reports and the EDDs.

3.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by EPA method 9315, radium-228 by EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

3.1 Overall Assessment

The radium-226 and radium-228 data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

3.2 Holding Times

The holding times for the radium-226 and radium-228 analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-228 data (batches 302924 and 303690). Three method blanks were reported for the radium-226 data (batches 302918, 302917 and 303816). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs and one LCS/LCS duplicate (LCSD) pair were reported for radium-226. One LCS and one LCS/LCSD pair were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of radium-226 in the LCSs in batches 302917 and 302918 were low and outside the laboratory and SOP specified acceptance criteria. Therefore, the concentrations of radium-226 in the associated samples were J qualified as estimated and the nondetect results were UJ qualified as estimated less than the MDC.

The recovery of radium-228 in the LCSD in batch 303690 was low and outside the laboratory and SOP acceptance criteria. Therefore, the concentrations of radium-228 in the associated

samples were J qualified as estimated and the nondetect results were UJ qualified as estimated less than the MDC.

The total radium results were qualified as follows. The total radium results that were less than the MDC in which one or both the radium-226 and radium-228 components were qualified, were UJ qualified as estimated less than the MDC. The total radium results in which one or both the radium-226 and radium-228 components were qualified were J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-7	Radium-226	1.23	NA	1.23	J	L-
BGWC-7	Combined Radium 226 + 228	1.95	NA	1.95	J	L-
BGWC-24	Radium-226	1.25	NA	1.25	J	L-
BGWC-24	Combined Radium 226 + 228	2.19	NA	2.19	J	L-
BGWC-23	Radium-226	0.522	NA	0.522	J	L-
BGWC-23	Combined Radium 226 + 228	0.983	U	0.983	UJ	L-
BGWA-29	Radium-226	0.373	U	0.373	UJ	L-
BGWA-29	Combined Radium 226 + 228	0.516	U	0.516	UJ	L-
BGWC-9	Radium-226	0.319	NA	0.319	J	L-
BGWC-9	Combined Radium 226 + 228	0.319	U	0.319	UJ	L-
BGWA-2	Radium-226	0.456	NA	0.456	J	L-
BGWA-2	Combined Radium 226 + 228	0.945	U	0.945	UJ	L-
BGWC-8	Radium-226	0.310	U	0.310	UJ	L-
BGWC-8	Combined Radium 226 + 228	0.494	U	0.494	UJ	L-
BGWC-16	Radium-226	0.253	U	0.253	UJ	L-
BGWC-16	Combined Radium 226 + 228	0.732	U	0.732	UJ	L-
Dup-1	Radium-226	0.158	U	0.158	UJ	L-
Dup-1	Combined Radium 226 + 228	0.165	U	0.165	UJ	L-
FBL061218	Radium-226	0.169	U	0.169	UJ	L-
FBL061218	Combined Radium 226 + 228	0.169	U	0.169	UJ	L-
EQBL061218	Radium-226	0.119	U	0.119	UJ	L-
EQBL061218	Combined Radium 226 + 228	0.663	U	0.663	UJ	L-
BGWC-22	Radium-226	1.13	NA	1.13	J	L-
BGWC-22	Radium-228	1.01	NA	1.01	J	L-
BGWC-22	Combined Radium 226 + 228	2.14	NA	2.14	J	L-
BGWC-12	Radium-226	0.146	U	0.146	UJ	L-
BGWC-12	Radium-228	0.170	U	0.170	UJ	L-
BGWC-12	Combined Radium 226 + 228	0.316	U	0.316	UJ	L-
BGWC-10	Radium-226	0.642	NA	0.642	J	L-
BGWC-10	Radium-228	0.580	U	0.580	UJ	L-
BGWC-10	Combined Radium 226 + 228	1.22	U	1.22	UJ	L-
BGWC-21	Radium-226	0.583	NA	0.583	J	L-

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-21	Radium-228	-0.121	U	-0.121	UJ	L-
BGWC-21	Combined Radium 226 + 228	0.583	U	0.583	UJ	L-
BGWC-17	Radium-226	0.113	U	0.113	UJ	L-
BGWC-17	Radium-228	0.525	U	0.525	UJ	L-
BGWC-17	Combined Radium 226 + 228	0.638	U	0.638	UJ	L-
BGWC-18	Radium-226	0.300	U	0.300	UJ	L-
BGWC-18	Radium-228	0.689	U	0.689	UJ	L-
BGWC-18	Combined Radium 226 + 228	0.989	U	0.989	UJ	L-
BGWC-25	Radium-226	0.244	U	0.244	UJ	L-
BGWC-25	Radium-228	0.477	U	0.477	UJ	L-
BGWC-25	Combined Radium 226 + 228	0.721	U	0.721	UJ	L-
FBL061418	Radium-226	0.143	U	0.143	UJ	L-
FBL061418	Radium-228	0.199	U	0.199	UJ	L-
FBL061418	Combined Radium 226 + 228	0.342	U	0.342	UJ	L-
EQBL061418	Radium-226	0.0243	U	0.0243	UJ	L-
EQBL061418	Radium-228	0.167	U	0.167	UJ	L-
EQBL061418	Combined Radium 226 + 228	0.191	U	0.191	UJ	L-
Dup-2	Radium-228	0.953	U	0.953	UJ	L-
Dup-2	Combined Radium 226 + 228	2.19	NA	2.19	J	L-
BGWC-20	Radium-226	0.578	NA	0.578	J	L-
BGWC-20	Combined Radium 226 + 228	0.686	U	0.686	UJ	L-
BGWC-14	Radium-226	5.08	NA	5.08	J	L-
BGWC-14	Combined Radium 226 + 228	6.20	NA	6.20	J	L-
BGWC-30	Radium-226	0.483	NA	0.483	J	L-
BGWC-30	Combined Radium 226 + 228	0.815	U	0.815	UJ	L-
BGWC-19	Radium-226	0.232	U	0.232	UJ	L-
BGWC-19	Combined Radium 226 + 228	0.625	U	0.625	UJ	L-

pCi/L- picocuries per liter
U- not detected at or above the MDC
NA-not applicable

3.6 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported for radium-226 using samples BGWA-29, BGWC-16 and BGWC-22 and one sample set specific laboratory duplicate was reported for radium-228 using sample BGWA-29. The RER (2σ) result was within the laboratory and SOP specified acceptance criteria.

Two batch laboratory duplicates were also reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the

data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

3.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory and SOP specified acceptance criteria.

3.8 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL061218 and EQBL061418. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs.

3.9 Field Blank

Two field blanks were collected with the sample sets, FBL061218 and FBL061418. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs.

3.10 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicates and the original samples BGWA-29 and BGWA-22, respectively.

3.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect results were reported.

3.12 Electronic Data Deliverables Review

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

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team per the SOP

DATA QUALIFIER DEFINITIONS

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.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team per the SOP

Reason Code	Explanation
BL	Laboratory blank contamination. The result should be considered "not-detected."
L	LCS and LCSD recoveries outside acceptance limits, indeterminate bias
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
L+	LCS and/or LCSD 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.

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date: 10 December 2018

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validations - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2610640, 2610642, 2610644, 2610645, 2610648, 2610650, 2610673, 2610674, 2610717 and 2610718

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-four aqueous samples, three field duplicate samples, three equipment blanks and three field blanks, collected 16-22 October 2018, as part of the Plant Bowen Ash Pond on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by EPA Methods 3005A/6020B
- Anions by EPA Method 300.0
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by EPA Method 9315
- Radium-228 by EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives. The qualified data should be used within the limitations of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001);
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012); and,
- Southern Company Services, Inc., Standard Operating Procedure (hereafter referred to as the SOP) for Level 2A Verification of Coal Combustion Residuals Data, Environmental Testing Laboratory Program, Draft, November 21, 2017, Revision 0, Prepared by Environmental Standards, Inc., Valley Forge, Pennsylvania.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
2610640001	BGWC-7
2610640002	BGWC-10
2610640003	BGWC-16
2610640004	BGWC-18
2610640006	Dup-2
2610642001	BGWC-7
2610642002	BGWC-10
2610642003	BGWC-16
2610642004	BGWC-18
2610642005	Dup-2
2610644001	BGWC-9
2610644002	BGWC-12
2610644003	BGWC-17
2610644004	BGWC-36D
2610644005	FBL 101718
2610644006	EQBL 101718
2610645001	BGWC-9
2610645002	BGWC-12
2610645003	BGWC-17
2610645004	FBL 101718
2610645005	EQBL 101718
2610648001	BGWA-29
2610648002	BGWC-8
2610648003	BGWA-2
2610648004	BGWA-6

Laboratory ID	Client ID
2610648005	Dup-1
2610648006	FBL 101618
2610648007	EQBL 101618
2610650001	BGWA-29
2610650002	BGWC-8
2610650003	BGWA-2
2610650004	Dup-1
2610650005	FBL 101618
2610650006	EQBL 101618
2610673001	BGWC-14
2610673002	BGWC-19
2610673003	BGWC-21
2610673004	BGWC-34D
2610673005	Dup-3
2610673006	FBL 101918
2610673007	EQBL 101918
2610674001	BGWC-14
2610674002	BGWC-19
2610674003	BGWC-21
2610674004	Dup-3
2610674005	FBL 101918
2610674006	EQBL 101918
2610717001	BGWC-20
2610717002	BGWC-22
2610717003	BGWC-25

Laboratory ID	Client ID
2610717004	BGWC-35D
2610717005	BGWC-32
2610717006	BGWC-23
2610717007	BGWC-30
2610717008	BGWC-24
2610718001	BGWC-20
2610718002	BGWC-22

Laboratory ID	Client ID
2610718003	BGWC-25
2610718004	BGWC-35D
2610718005	BGWC-32
2610718006	BGWC-23
2610718007	BGWC-30
2610718008	BGWC-24

The samples were received within 0-6ºC. No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- 2610640, 2610642, 2610648, 2610650, 2610673 and 2610674: There were no times of collection listed for the field duplicates, Dup-2 Dup-1 and Dup-3. The laboratory assigned collection times of 00:00.
- 2610640, 2610642, 2610644, 2610645, 2610648, 2610650, 2610717 and 2610718: The relinquishing signatures, dates and times were missing for the second sample transfers.

Laboratory report 2610640 was revised on December 5, 2018 to include the correct COC.

1.0 METALS

The samples were analyzed by EPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

1.1 Overall Assessment

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

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 15773 15825 15886). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples BGWC-17, BGWC-34D and BGWC-32. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of calcium in the MS/MSD pair using samples BGWC-17, BGWC-34D and BGWC-32 were either low or high and outside the laboratory specified acceptance criteria. However, since the sample concentrations were greater than four times the spike concentrations, no qualifications were applied to the data, based on professional and technical judgment.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EQBL 101718, EQBL 101618 and EQBL 101918. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Barium, boron and calcium were detected in EQBL 101718 at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Since the barium, boron and calcium concentrations in EQBL 101718 were U* qualified due to field blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

Barium was detected in EQBL 101618 and EQBL 101918 at an estimated concentration greater than the MDL and less than the RL. Since the barium concentrations in EQBL 101618 and EQBL 101918 were U* qualified due to field blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

1.7 Field Blank

Three field blanks were collected with the sample sets, FBL 101718, FBL 101618 and FBL 101918. Metals were not detected in the field blanks above the MDLs, with the following exception.

Barium, boron and calcium were detected in FBL 101718 at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the barium, boron and calcium concentrations in the associated sample less than five times the field blank concentrations were U* qualified as not detected at the reported concentrations.

Barium was detected in FBL 101618 and FBL 101918 at estimated concentrations greater than the MDL and less than the RL. Therefore, the barium concentrations in the associated samples less than five times the field blank concentrations were U* qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
EQBL 101718	Barium	0.0025	J	0.0025	U*	BF
EQBL 101718	Boron	0.0074	J	0.0074	U*	BF
EQBL 101718	Calcium	0.034	J	0.034	U*	BF
EQBL 101618	Barium	0.0022	J	0.0022	U*	BF
EQBL 101918	Barium	0.0023	J	0.0023	U*	BF

mg/L- milligram per liter

J- estimated concentration greater than the MDL and less than the RL
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-1, DUP-2 and DUP-3. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWA-2, BGWC-16 and BGWC-19, respectively.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverables (EDDs) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The laboratory flags D3 and M6 used in the level II reports were not included in the EDDs. No other discrepancies were identified between the level II reports and the EDDs.

2.0 WET CHEMISTRY

The samples were analyzed for anions by EPA method 300.0 and TDS by Standard Method 2540C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
⊗ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Equipment Blank
⊗ Field Blank
✓ Field Duplicate
✓ Sensitivity

⊗ Electronic Data Deliverables Review

2.1 Overall Assessment

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

2.2 Holding Times

The holding time for the anion analysis of a water sample is 28 days from sample collection to analysis. The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the anions (batches 15802 15803 15861). The wet chemistry parameters were not detected in the method blanks above the MDLs, with the following exception.

Chloride was detected in the method blank in batch 15803 at an estimated concentration greater than the MDL and less than the RL. Therefore, the chloride concentrations in the associated samples less than five times the method blank concentration were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
FBL 101918	Chloride	0.070	J B	0.070	U*	BL
EQBL 101918	Chloride	0.068	J B	0.068	U*	BL

mg/L- milligram per liter
J-estimated concentration greater than the MDL and less than the RL
B-laboratory flag indicating analyte was detected in the associated method blank

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample

BGWC-14 and three sample set specific MSs were reported using samples BGWC-7, BGWC-19 and BGWC-20. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of chloride and sulfate in the MS/MSD pair using sample BGWC-14 were low and outside the laboratory and SOP specified acceptance criteria. Based on the difference between the sample and spiked sulfate concentrations, the MS/MSD concentrations exceeding the calibration ranges, and professional and technical judgment, no qualifications were applied to the sulfate data. However, the chloride concentrations were J qualified as estimated and the nondetect chloride results were UJ qualified as estimated less than the MDL in the associated samples.

The recovery of sulfate in the MS using sample BGWC-19 was low and outside the laboratory and SOP specified acceptance criteria. Based on the difference between the sample and spike concentrations and professional and technical judgment, no qualifications were applied to the data.

The recoveries of chloride and sulfate in the MS using sample BGWC-20 were low and outside the laboratory and SOP specified acceptance criteria. Based on the difference between the sample and spike concentrations and professional and technical judgment, no qualifications were applied to the data.

Two batch MS/MSD pairs were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BGWC-14	Chloride	35.1	M1	35.1	J	M-
BGWC-19	Chloride	15.3	NA	15.3	J	M-
BGWC-21	Chloride	4.1	NA	4.1	J	M-
BGWC-34D	Chloride	28.0	NA	28.0	J	M-
Dup-3	Chloride	15.2	NA	15.2	J	M-
FBL 101918	Chloride	0.070	J B	0.070	J	M-
EQBL 101918	Chloride	0.068	J B	0.068	J	M-

mg/L- milligram per liter
U-not detected at or above the MDL
M1-laboratory flag defined as Matrix spike recovery exceeded QC limits. Batch accepted based on LCS recovery.
NA-not applicable

2.5 Laboratory Control Sample

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

2.6 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported for TDS, using samples BGWA-29, Dup-3 and BGWC-20. The RPD results were within the laboratory and SOP specified acceptance criteria.

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

2.7 Equipment Blank

Three equipment blanks were collected with the sample sets, EQBL 101718, EQBL 101618 and EQBL 101918. The wet chemistry parameters were not detected in the equipment blanks above the MDLs, with the following exceptions.

Chloride and TDS were detected in EQBL 101718 and EQBL 101618 at estimated concentrations greater than the MDLs and less than the RLs. Since the chloride and TDS concentrations in EQBL 101718 and EQBL 101618 were U* qualified based on field blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

Chloride and TDS were detected in EQBL 101918 at estimated concentrations greater than the MDLs and less than the RLs. Since the chloride concentration was U* qualified based on method blank contamination and the TDS concentration was U* qualified based on field blank contamination in EQBL, no additional qualifications were applied to the data, based on professional and technical judgment.

2.8 Field Blank

Three field blanks were collected with the sample sets, FBL 101718, FBL 101618 and FBL 101918. The wet chemistry parameters were not detected in the field blanks above the MDLs, with the following exceptions.

Chloride was detected in FBL 101718 at an estimated concentration greater than the MDL and less than the RL. Therefore, the chloride concentration in the associated sample less than five times the field blank concentrations was U* qualified as not detected at the reported concentration.

Chloride and TDS were detected in FBL 101618 at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the chloride and TDS concentrations in the associated sample less than five times the field blank concentrations were U* qualified as not detected at the reported concentrations.

Chloride was detected at estimated concentration greater than the MDL and less than the RL and TDS (28.0 mg/L) was detected at a concentration greater than the RL in FBL 101918. Since the chloride concentration in FBL 101918 was U* qualified due to method blank contamination, no additional qualifications were applied to the chloride data, based on professional and technical judgment. However, the TDS concentration in the associated sample less than five times the field blank concentration was U* qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
EQBL 101718	Chloride	0.068	J	0.068	U*	BF
EQBL 101618	Chloride	0.090	J	0.090	U*	BF
EQBL 101618	TDS	18.0	J	18.0	U*	BF
EQBL 101918	TDS	22.0000	J	22.0000	U*	BF

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL

2.9 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples BGWA-29 and BGWA-22, respectively.

2.10 Sensitivity

The samples were reported to the MDLs. No elevated nondetect results were reported.

2.11 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The

laboratory flags M1 and B used in the level II reports were not included in the EDDs. No other discrepancies were identified between the level II reports and the EDDs.

3.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by EPA method 9315, radium-228 by EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

3.1 Overall Assessment

The radium-226 and radium-228 data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

3.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-228 data (batches 317858 and 318171). Two method blanks were reported for the radium-226 data (batches 317859 and 318192). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs and two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of radium-226 in the LCS and LCS/LCSD pair in batch 317859, and the LCSs in batch 318192 were low and outside the laboratory and SOP specified acceptance criteria. Therefore, the concentrations of radium-226 in the associated samples were J qualified as estimated and the nondetect results were UJ qualified as estimated less than the MDC.

The recovery of radium-228 in the LCSD in batch 317858 was low and outside the laboratory and SOP acceptance criteria. Therefore, the concentrations of radium-228 in the associated samples were J qualified as estimated and the nondetect results were UJ qualified as estimated less than the MDC.

The total radium results were qualified as follows. The total radium results that were less than the MDC in which one or both the radium-226 and radium-228 components were qualified, were UJ qualified as estimated less than the MDC. The total radium results in which one or both the radium-226 and radium-228 components were J qualified as estimated were J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-7	Radium-226	0.647	NA	0.647	J	L-
BGWC-7	Radium-228	0.455	U	0.455	UJ	L-

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-7	Combined Radium 226 + 228	1.10	NA	1.10	J	L-
BGWC-10	Radium-226	0.412	NA	0.412	J	L-
BGWC-10	Radium-228	0.429	U	0.429	UJ	L-
BGWC-10	Combined Radium 226 + 228	0.841	U	0.841	UJ	L-
BGWC-16	Radium-226	0.243	NA	0.243	J	L-
BGWC-16	Radium-228	0.279	U	0.279	UJ	L-
BGWC-16	Combined Radium 226 + 228	0.522	U	0.522	UJ	L-
BGWC-18	Radium-226	0.299	NA	0.299	J	L-
BGWC-18	Radium-228	0.576	U	0.576	UJ	L-
BGWC-18	Combined Radium 226 + 228	0.875	U	0.875	UJ	L-
Dup-2	Radium-226	0.256	NA	0.256	J	L-
Dup-2	Radium-228	0.339	U	0.339	UJ	L-
Dup-2	Combined Radium 226 + 228	0.595	U	0.595	UJ	L-
BGWC-9	Radium-226	0.319	NA	0.319	J	L-
BGWC-9	Radium-228	-0.0382	U	-0.0382	UJ	L-
BGWC-9	Combined Radium 226 + 228	0.319	U	0.319	UJ	L-
BGWC-12	Radium-226	0.109	U	0.109	UJ	L-
BGWC-12	Radium-228	0.217	U	0.217	UJ	L-
BGWC-12	Combined Radium 226 + 228	0.326	U	0.326	UJ	L-
BGWC-17	Radium-226	0.134	U	0.134	UJ	L-
BGWC-17	Radium-228	0.421	U	0.421	UJ	L-
BGWC-17	Combined Radium 226 + 228	0.555	U	0.555	UJ	L-
FBL 101718	Radium-226	0.0835	U	0.0835	UJ	L-
FBL 101718	Radium-228	0.424	U	0.424	UJ	L-
FBL 101718	Combined Radium 226 + 228	0.508	U	0.508	UJ	L-
EQBL 101718	Radium-226	0.162	U	0.162	UJ	L-
EQBL 101718	Radium-228	0.378	U	0.378	UJ	L-
EQBL 101718	Combined Radium 226 + 228	0.540	U	0.540	UJ	L-
BGWA-29	Radium-226	0.146	NA	0.146	J	L-
BGWA-29	Radium-228	-0.0264	U	-0.0264	UJ	L-
BGWA-29	Combined Radium 226 + 228	0.146	U	0.146	UJ	L-
BGWC-8	Radium-226	0.213	NA	0.213	J	L-

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-8	Radium-228	0.420	U	0.420	UJ	L-
BGWC-8	Combined Radium 226 + 228	0.633	U	0.633	UJ	L-
BGWA-2	Radium-226	0.424	NA	0.424	J	L-
BGWA-2	Radium-228	0.146	U	0.146	UJ	L-
BGWA-2	Combined Radium 226 + 228	0.570	U	0.570	UJ	L-
Dup-1	Radium-226	0.338	NA	0.338	J	L-
Dup-1	Radium-228	0.122	U	0.122	UJ	L-
Dup-1	Combined Radium 226 + 228	0.460	U	0.460	UJ	L-
FBL 101618	Radium-226	0.157	U	0.157	UJ	L-
FBL 101618	Radium-228	0.634	U	0.634	UJ	L-
FBL 101618	Combined Radium 226 + 228	0.791	U	0.791	UJ	L-
EQBL 101618	Radium-226	0.144	U	0.144	UJ	L-
EQBL 101618	Radium-228	0.789	U	0.789	UJ	L-
EQBL 101618	Combined Radium 226 + 228	0.933	U	0.933	UJ	L-
BGWC-14	Radium-226	2.10	NA	2.10	J	L-
BGWC-14	Combined Radium 226 + 228	3.76	NA	3.76	J	L-
BGWC-19	Radium-226	0.138	U	0.138	UJ	L-
BGWC-19	Combined Radium 226 + 228	0.784	U	0.784	UJ	L-
BGWC-21	Radium-226	0.242	NA	0.242	J	L-
BGWC-21	Combined Radium 226 + 228	0.982	U	0.982	UJ	L-
Dup-3	Radium-226	0.256	NA	0.256	J	L-
Dup-3	Combined Radium 226 + 228	0.542	U	0.542	UJ	L-
FBL 101918	Radium-226	0.201	U	0.201	UJ	L-
FBL 101918	Combined Radium 226 + 228	0.201	U	0.201	UJ	L-
EQBL 101918	Radium-226	0.154	U	0.154	UJ	L-
EQBL 101918	Combined Radium 226 + 228	0.726	U	0.726	UJ	L-
BGWC-20	Radium-226	0.362	NA	0.362	J	L-
BGWC-20	Combined Radium 226 + 228	0.559	U	0.559	UJ	L-
BGWC-22	Radium-226	0.861	NA	0.861	J	L-
BGWC-22	Combined Radium 226 + 228	1.43	NA	1.43	J	L-

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BGWC-25	Radium-226	0.182	NA	0.182	J	L-
BGWC-25	Combined Radium 226 + 228	0.741	U	0.741	UJ	L-
BGWC-35D	Radium-226	0.705	NA	0.705	J	L-
BGWC-35D	Combined Radium 226 + 228	1.54	NA	1.54	J	L-
BGWC-32	Radium-226	0.794	NA	0.794	J	L-
BGWC-32	Combined Radium 226 + 228	1.22	U	1.22	UJ	L-
BGWC-23	Radium-226	0.672	NA	0.672	J	L-
BGWC-23	Combined Radium 226 + 228	1.21	NA	1.21	J	L-
BGWC-30	Radium-226	0.885	NA	0.885	J	L-
BGWC-30	Combined Radium 226 + 228	1.02	U	1.02	UJ	L-
BGWC-24	Radium-226	0.673	NA	0.673	J	L-
BGWC-24	Combined Radium 226 + 228	2.18	NA	2.18	J	L-

pCi/L- picocuries per liter
U- not detected at or above the MDC
NA-not applicable

3.6 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported for radium-226 using samples 2610645004 2610674002 and one sample set specific laboratory duplicate was reported for radium-228 using sample BGWA-29. The RER (2σ) results were within the laboratory and SOP specified acceptance criteria.

Two batch laboratory duplicates were also reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

3.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory and SOP specified acceptance criteria.

3.8 Equipment Blank

Two equipment blanks were collected with the sample sets, EQBL 101718. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs.

3.9 Field Blank

Two field blanks were collected with the sample sets, FBL 101718. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs.

3.10 Field Duplicate

Two field duplicate samples were collected with the sample sets, DUP-1 and DUP-2. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicates and the original samples BGWA-29 and BGWA-22, respectively.

3.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect results were reported.

3.12 Electronic Data Deliverables Review

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

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team per the SOP

DATA QUALIFIER DEFINITIONS

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.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team per the SOP

Reason Code	Explanation
BL	Laboratory blank contamination. The result should be considered "not-detected."
L	LCS and LCSD recoveries outside acceptance limits, indeterminate bias
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
L+	LCS and/or LCSD 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.

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date:	21 January 2019
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validations - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2610643, 2610646, 2610651 and 2610675**

SITE: Plant Bowen Ash Pond

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of four aqueous samples, collected 16-19 October 2018, as part of the Plant Bowen Ash Pond on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Peachtree Corners, Georgia, for the following analytical test:

- Metals by EPA Methods 3005A/6020B

EXECUTIVE SUMMARY

Based on this Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives. The qualified data should be used within the limitations of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001);
- Southern Company Services, Inc., Standard Operating Procedure (hereafter referred to as the SOP) for Level 2A Verification of Coal Combustion Residuals Data, Environmental

Testing Laboratory Program, Draft, November 21, 2017, Revision 0, Prepared by Environmental Standards, Inc., Valley Forge, Pennsylvania.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
2610643001	BGWC-31
2610646001	BGWC-36D

Laboratory ID	Client ID
2610651001	BGWA-6
2610675001	BGWC-34D

The samples were received within 0-6ºC. No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- 2610643, 2610646 and 2610651: The relinquishing signatures, dates and times were missing for the second sample transfers.

1.0 METALS

The samples were analyzed by EPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

1.1 Overall Assessment

The metals data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of

valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the dataset is 100%.

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 20245). Metals were not detected in the method blank above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample BGWC-31. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EQBL 101718, EQBL 101618 and EQBL 101918 and reported in laboratory reports 2610644, 2610648 and 2610673, respectively. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Barium, boron and calcium were detected in EQBL 101718 at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Since the barium, boron and calcium concentrations in EQBL 101718 were U* qualified due to field blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

Barium was detected in EQBL 101618 and EQBL 101918 at an estimated concentration greater than the MDL and less than the RL. Since the barium concentrations in EQBL 101618 and EQBL 101918 were U* qualified due to field blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

1.7 Field Blank

Three field blanks were collected with the sample sets, FBL 101718, FBL 101618 and FBL 101918. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Barium, boron and calcium were detected in FBL 101718 at estimated concentrations greater than the MDLs and less than the RLs. Barium was detected in FBL 101618 and FBL 101918 at estimated concentrations greater than the MDL and less than the RL. Therefore, the barium concentration in the associated sample less than five times the field blank concentrations was U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
BGWA-6	Barium	0.011	NA	0.011	U*	BF

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

1.8 Field Duplicate

Field duplicates were not collected with the sample sets.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverables (EDDs) Review

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

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team per the SOP

DATA QUALIFIER DEFINITIONS

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.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team per the SOP

Reason Code	Explanation
BL	Laboratory blank contamination. The result should be considered "not-detected."
L	LCS and LCSD recoveries outside acceptance limits, indeterminate bias
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
L+	LCS and/or LCSD 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.

APPENDIX A2
Field Sampling Forms

Product Name: Low-Flow System

Date: 2018-03-26 10:32:08

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**90 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**84 ft**

Well Information:		Pumping Information:	
Well ID	BGWA-2	Final Pumping Rate	125 mL/min
Well diameter	2 in	Total System Volume	**0.886708 L**
Well Total Depth	89.02 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	46.76 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:11:43	480.03	14.03	7.65	320.41	0.42	46.66	0.68	74.35
Last 5	10:15:43	720.03	14.03	7.66	319.58	0.40	46.65	0.58	72.05
Last 5	10:19:43	960.03	14.11	7.70	319.67	0.32	46.65	0.48	69.30
Last 5	10:23:43	1200.02	14.07	7.73	318.79	0.52	46.66	0.45	68.33
Last 5	10:27:43	1440.02	14.44	7.74	321.03	0.24	46.66	0.40	67.05
Variance 0			0.08	0.05	0.10			-0.10	-2.75
Variance 1			-0.04	0.02	-0.88			-0.03	-0.98
Variance 2			0.36	0.01	2.24			-0.05	-1.28

Notes

Pre-purged 0.5L

Grab Samples

BGWA-2

Metals

BGWA-2

Inorganics

BGWA-2

Radium

Product Name: Low-Flow System

Date: 2018-03-26 13:26:23

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	100 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	95.10 ft

Well Information:		Pumping Information:	
Well ID	BGWA-29	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.9263423 L
Well Total Depth	100.10 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	40.49 ft	Total Volume Pumped	2.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:08:38	240.10	15.46	7.80	215.39	0.35	40.51	7.05	49.17
Last 5	13:12:38	480.03	15.48	7.81	216.04	0.40	40.51	7.37	47.30
Last 5	13:16:38	720.02	15.48	7.88	214.92	0.40	40.51	7.49	45.25
Last 5	13:20:38	960.01	15.57	7.93	212.22	1.36	40.51	7.60	40.56
Last 5	13:24:38	1200.05	15.67	7.98	208.66	1.09	40.51	7.59	37.54
Variance 0			-0.01	0.07	-1.11			0.13	-2.06
Variance 1			0.10	0.05	-2.70			0.11	-4.69
Variance 2			0.10	0.05	-3.56			-0.00	-3.01

Notes

Pre-purged 1 liter.

Grab Samples

BGWA-29

Metals

BGWA-29

Inorganics

BGWA-29

Radium

Product Name: Low-Flow System

Date: 2018-03-26 17:12:09

Project Information:		Pump Information:	
Operator Name	Brian Steele	Pump Model/Type	QED
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Ponds	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	93 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	82 ft

Well Information:		Pumping Information:	
Well ID	BGWC-7	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9000984 L
Well Total Depth	87.5 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	43.39 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	16:52:39	13445.78	15.97	7.00	1229.05	0.68	74.70	0.22	-258.91
Last 5	16:56:39	13685.78	16.00	7.00	1224.62	0.68	75.45	0.21	-259.10
Last 5	17:00:39	13925.77	16.01	7.00	1228.92	0.86	76.10	0.21	-259.62
Last 5	17:04:38	14165.77	15.84	7.00	1227.71	0.65	76.70	0.24	-256.98
Last 5	17:08:38	14405.76	16.04	7.00	1227.92	0.63	77.25	0.22	-258.06
Variance 0			0.00	-0.00	4.31			-0.00	-0.51
Variance 1			-0.16	0.00	-1.21			0.03	2.64
Variance 2			0.20	-0.00	0.21			-0.02	-1.08

Notes

Complete evacuation

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-26 14:14:02

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**80 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**75 ft**

Well Information:		Pumping Information:	
Well ID	BGWC-8	Final Pumping Rate	115 mL/min
Well diameter	2 in	Total System Volume	**0.842074 L**
Well Total Depth	80.01 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	44.80 ft	Total Volume Pumped	6.45 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:53:15	2405.00	15.59	7.71	326.59	5.96	44.80	5.53	72.83
Last 5	13:57:16	2646.01	15.52	7.70	327.42	5.30	44.80	5.56	73.03
Last 5	14:01:16	2886.00	15.24	7.71	327.37	4.71	44.81	5.45	73.26
Last 5	14:05:16	3126.00	15.30	7.70	330.87	4.58	44.80	5.43	72.97
Last 5	14:09:16	3366.00	15.25	7.71	331.87	4.33	44.80	5.32	73.03
Variance 0			-0.27	0.00	-0.05			-0.12	0.24
Variance 1			0.05	-0.01	3.51			-0.02	-0.29
Variance 2			-0.05	0.01	1.00			-0.11	0.06

Notes

Pre-purged 0.5L

Grab Samples

BGWC-8

Metals

BGWC-8

Inorganics

BGWC-8

Radium

Product Name: Low-Flow System

Date: 2018-03-27 10:42:59

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**64 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**59 ft**

Well Information:		Pumping Information:	
Well ID	BGWC-9	Final Pumping Rate	115 mL/min
Well diameter	2 in	Total System Volume	**0.770659 L**
Well Total Depth	63.94 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.72 in
Depth to Water	28.66 ft	Total Volume Pumped	10.58 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:21:58	4559.95	15.22	7.37	539.19	5.21	28.71	0.69	55.77
Last 5	10:25:58	4799.94	15.22	7.37	534.62	5.42	28.71	0.71	54.75
Last 5	10:29:58	5039.92	15.31	7.37	536.06	4.98	28.71	0.74	53.54
Last 5	10:33:58	5279.93	15.43	7.38	534.31	4.86	28.71	0.76	52.89
Last 5	10:37:58	5519.93	15.47	7.38	533.02	4.69	28.72	0.78	51.69
Variance 0			0.09	0.00	1.44			0.02	-1.21
Variance 1			0.12	0.00	-1.75			0.02	-0.65
Variance 2			0.05	0.00	-1.29			0.03	-1.20

Notes

Pre-purged 1.5L

Grab Samples

BGWC-9
Metals
BGWC-9
Inorganics
BGWC-9
Radium

Product Name: Low-Flow System

Date: 2018-03-27 15:45:35

Project Information:		Pump Information:	
Operator Name	Brian Steele	Pump Model/Type	QED
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Ponds	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	BGWC-10	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.7974396 L
Well Total Depth	62.36 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	281 in
Depth to Water	26.18 ft	Total Volume Pumped	36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:23:45	21195.56	16.61	7.50	578.66	2.15	49.03	1.37	-88.45
Last 5	15:27:51	21441.56	16.55	7.50	578.16	2.18	49.16	1.35	-89.72
Last 5	15:31:54	21684.55	16.61	7.50	578.31	2.16	49.33	1.34	-89.26
Last 5	15:35:55	21925.54	16.64	7.50	578.41	2.32	49.45	1.31	-89.72
Last 5	15:39:55	22165.54	16.55	7.51	576.30	2.10	49.62	1.28	-90.09
Variance 0			0.06	0.00	0.15			-0.02	0.46
Variance 1			0.04	0.00	0.10			-0.03	-0.45
Variance 2			-0.09	0.00	-2.11			-0.02	-0.37

Notes

Grab Samples
BGWC-10
    Inorganics
BGWC-10
    Metals
BGWC-10
    Radium

Product Name: Low-Flow System

Date: 2018-03-28 10:29:52

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	78 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	73.30 ft

Well Information:		Pumping Information:	
Well ID	BGWC-12	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.828147 L
Well Total Depth	78.30 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	3.24 in
Depth to Water	37.47 ft	Total Volume Pumped	2.88 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:12:20	480.03	16.39	7.25	966.87	2.12	37.70	1.85	90.41
Last 5	10:16:20	720.02	16.74	7.24	967.04	2.23	37.70	1.80	87.09
Last 5	10:20:20	960.05	17.10	7.23	965.11	2.75	37.72	1.75	85.13
Last 5	10:24:20	1200.03	16.98	7.22	969.92	2.86	37.73	1.78	84.83
Last 5	10:28:20	1440.00	17.45	7.22	967.27	2.73	37.74	1.75	83.71
Variance 0			0.36	-0.00	-1.92			-0.05	-1.97
Variance 1			-0.12	-0.01	4.80			0.02	-0.30
Variance 2			0.47	-0.00	-2.64			-0.03	-1.12

Notes

Pre-purged 2 liters

Grab Samples

BGWC-12

Metals

BGWC-12

Inorganics

BGWC-12

Radium

Product Name: Low-Flow System

Date: 2018-03-27 15:06:55

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	89 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	87.50 ft

Well Information:		Pumping Information:	
Well ID	BGWC-14	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.8772447 L
Well Total Depth	88.80 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	107.64 in
Depth to Water	73.53 ft	Total Volume Pumped	17.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:48:40	8645.92	17.02	7.29	946.25	1.87	82.02	5.50	69.64
Last 5	14:52:40	8885.93	17.01	7.29	947.44	1.94	82.13	5.52	69.88
Last 5	14:56:40	9125.92	17.00	7.29	947.04	2.16	82.27	5.51	70.27
Last 5	15:00:40	9365.92	16.95	7.28	946.61	1.91	82.40	5.49	70.53
Last 5	15:04:40	9605.91	16.85	7.28	947.01	1.94	82.50	5.48	70.52
Variance 0			-0.01	-0.01	-0.40			-0.01	0.39
Variance 1			-0.05	-0.00	-0.43			-0.02	0.26
Variance 2			-0.10	-0.01	0.40			-0.01	-0.01

Notes

Water level dropped below top of screen. Complete evacuation method initiated. Samples to be collected 3/28.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-27 10:36:02

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	49 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43.99 ft

Well Information:		Pumping Information:	
Well ID	BGWC-16	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.6987078 L
Well Total Depth	48.99 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.96 in
Depth to Water	15.30 ft	Total Volume Pumped	4.48 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:16:07	720.03	14.49	6.90	874.26	1.07	15.36	0.34	98.56
Last 5	10:20:07	960.02	15.12	6.84	877.80	1.09	15.36	0.58	98.08
Last 5	10:24:07	1200.02	15.73	6.87	868.00	0.78	15.39	0.29	94.87
Last 5	10:28:07	1440.02	15.03	6.85	865.46	0.76	15.37	0.22	95.77
Last 5	10:32:07	1680.02	14.69	6.81	886.12	1.47	15.38	0.31	95.58
Variance 0			0.60	0.02	-9.80			-0.29	-3.21
Variance 1			-0.69	-0.02	-2.54			-0.06	0.90
Variance 2			-0.34	-0.04	20.67			0.09	-0.20

Notes

Pre-purged 1 liter

Grab Samples

BGWC-16

Metals

BGWC-16

Inorganics

BGWC-16

Radium

DUP-1
Metals
DUP-1
Inorganics
DUP-1
Radium

Product Name: Low-Flow System

Date: 2018-03-27 12:43:40

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**68 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**63 ft**

Well Information:		Pumping Information:	
Well ID	BGWC-17	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	**0.788513 L**
Well Total Depth	68.10 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	13.82 ft	Total Volume Pumped	2.64 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:21:52	480.02	14.66	7.25	616.90	0.39	13.84	0.54	23.41
Last 5	12:25:52	720.02	14.94	7.26	614.73	0.57	13.83	0.51	21.93
Last 5	12:29:52	960.02	15.16	7.28	605.74	0.74	13.84	0.37	21.88
Last 5	12:33:52	1200.01	15.37	7.28	601.09	0.56	13.85	0.26	22.35
Last 5	12:37:52	1440.00	15.47	7.28	598.32	0.24	13.58	0.22	22.78
Variance 0			0.22	0.02	-8.99			-0.14	-0.05
Variance 1			0.21	0.00	-4.65			-0.11	0.47
Variance 2			0.10	0.00	-2.77			-0.04	0.43

Notes

Pre-purged 0.5L

Grab Samples

BGWC-17

Metals

BGWC-17

Inorganics

BGWC-17

Radium

Product Name: Low-Flow System

Date: 2018-03-27 14:24:55

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**38 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**32.82** ft

Well Information:		Pumping Information:	
Well ID	BGWC-18	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	**0.654610 L**
Well Total Depth	37.82 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	12.09 ft	Total Volume Pumped	3.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:02:52	480.02	15.56	6.50	428.25	2.38	12.10	1.89	21.30
Last 5	14:06:52	720.02	15.65	6.46	420.07	3.66	12.11	1.81	22.30
Last 5	14:10:52	960.02	15.60	6.43	415.23	2.80	12.11	1.76	23.48
Last 5	14:14:52	1200.01	15.55	6.42	410.76	4.01	12.11	1.73	24.33
Last 5	14:18:52	1440.01	15.42	6.41	412.00	4.25	12.11	1.78	25.48
Variance 0			-0.05	-0.02	-4.84			-0.05	1.18
Variance 1			-0.06	-0.01	-4.47			-0.03	0.85
Variance 2			-0.13	-0.01	1.24			0.05	1.15

Notes

Pre-purged 1.5L

Grab Samples

BGWC-18

Metals

BGWC-18

Inorganics

BGWC-18

Radium

Product Name: Low-Flow System

Date: 2018-03-27 15:51:07

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**55 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**49.70** ft

Well Information:		Pumping Information:	
Well ID	BGWC-19	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	**0.730488 L**
Well Total Depth	54.70 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	2.28 in
Depth to Water	13.81 ft	Total Volume Pumped	2.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:29:05	240.04	15.61	6.53	415.76	0.50	14.01	1.87	41.56
Last 5	15:33:05	480.03	15.49	6.53	417.12	0.42	13.98	1.86	41.94
Last 5	15:37:05	720.03	15.34	6.53	417.61	0.24	13.96	1.85	42.67
Last 5	15:41:05	960.03	15.30	6.53	416.27	0.41	13.97	1.79	42.46
Last 5	15:45:05	1200.02	15.39	6.52	414.72	0.37	14.00	1.74	42.37
Variance 0			-0.15	0.00	0.49			-0.00	0.73
Variance 1			-0.04	-0.00	-1.34			-0.06	-0.21
Variance 2			0.08	-0.01	-1.54			-0.06	-0.09

Notes

Pre-purged 1.5L

Grab Samples

BGWC-19

Metals

BGWC-19

Inorganics

BGWC-19

Radium

Product Name: Low-Flow System

Date: 2018-03-28 13:05:52

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**50 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**44.74** ft

Well Information:		Pumping Information:	
Well ID	BGWC-20	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	**0.708171 L**
Well Total Depth	49.74 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	113.64 in
Depth to Water	14.16 ft	Total Volume Pumped	22.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:41:16	11306.81	18.72	7.17	1483.35	0.32	23.60	0.64	36.55
Last 5	12:45:16	11546.80	18.82	7.18	1478.78	0.36	23.50	0.63	35.81
Last 5	12:49:16	11786.81	18.47	7.18	1488.00	0.45	23.55	0.44	35.61
Last 5	12:53:16	12026.79	18.44	7.19	1491.61	0.32	23.60	0.37	34.65
Last 5	12:57:19	12269.79	18.63	7.19	1487.93	0.22	23.63	0.40	33.30
Variance 0			-0.35	0.01	9.22			-0.19	-0.20
Variance 1			-0.03	0.00	3.61			-0.07	-0.96
Variance 2			0.19	-0.00	-3.69			0.03	-1.35

Notes

Pre-purged 1.0L

DUP samples were taken at this well

Grab Samples

BGWC-20

Metals

BGWC-20

Inorganics

BGWC-20
    Radium
DUP2
    Metals
DUP2
    Inorganics
DUP2
    Radium

Product Name: Low-Flow System

Date: 2018-03-28 15:20:35

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**54 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**48.35** ft

Well Information:		Pumping Information:	
Well ID	BGWC-21	Final Pumping Rate	115 mL/min
Well diameter	2 in	Total System Volume	**0.726025 L**
Well Total Depth	53.35 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	3.48 in
Depth to Water	16.02 ft	Total Volume Pumped	2.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:55:04	240.04	20.47	7.74	370.40	1.42	16.47	0.50	-8.81
Last 5	14:59:04	480.03	20.16	7.72	378.94	3.14	16.47	0.33	-10.81
Last 5	15:03:04	720.03	20.03	7.70	382.37	4.30	16.60	0.25	-12.43
Last 5	15:07:04	960.02	20.11	7.69	390.56	3.87	16.45	0.21	-14.61
Last 5	15:11:04	1200.01	21.09	7.69	390.58	4.52	16.31	0.21	-15.97
Variance 0			-0.14	-0.02	3.43			-0.08	-1.61
Variance 1			0.08	-0.01	8.19			-0.04	-2.18
Variance 2			0.99	-0.00	0.02			0.01	-1.36

Notes

Pre-purged 0.75 L

Grab Samples

BGWC-21

Metals

BGWC-21

Inorganics

BGWC-21
Radium

Product Name: Low-Flow System

Date: 2018-03-29 11:25:42

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	BGWC-22	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.6719272 L
Well Total Depth	43.00 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	23.91 ft	Total Volume Pumped	3.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:06:01	240.10	19.69	7.04	3033.14	2.00	24.12	0.42	102.97
Last 5	11:10:01	480.03	19.61	7.00	3042.88	1.55	24.17	0.30	101.23
Last 5	11:14:01	720.06	19.45	6.97	3049.87	1.79	24.23	0.21	99.98
Last 5	11:18:01	960.04	19.64	6.97	3050.02	1.62	24.14	0.20	98.10
Last 5	11:22:01	1200.01	19.46	6.96	3047.54	1.46	24.16	0.33	97.07
Variance 0			-0.16	-0.03	6.98			-0.10	-1.24
Variance 1			0.19	-0.00	0.15			-0.01	-1.88
Variance 2			-0.18	-0.01	-2.48			0.13	-1.03

Notes

Pre-purged 2 liters.

Grab Samples

BGWC-22

Metals

BGWC-22

Inorganics

BGWC-22

Radium

Product Name: Low-Flow System

Date: 2018-03-29 12:35:52

Project Information:		Pump Information:	
Operator Name	Audrey Fisher	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	**51 ft**
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	**46** ft

Well Information:		Pumping Information:	
Well ID	BGWC-23	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	**0.712635 L**
Well Total Depth	51.12 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	13.8 in
Depth to Water	28.92 ft	Total Volume Pumped	2.64 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:13:20	480.03	19.67	7.08	2343.69	1.40	30.40	0.26	102.97
Last 5	12:17:20	720.03	19.89	7.06	2413.12	1.61	30.23	0.25	100.56
Last 5	12:21:20	960.02	19.89	7.07	2444.06	1.75	30.08	0.27	98.41
Last 5	12:25:20	1200.01	19.70	7.07	2454.86	1.56	30.05	0.28	96.32
Last 5	12:29:21	1441.00	19.42	7.06	2518.09	1.69	30.07	0.29	94.50
Variance 0			0.00	0.01	30.94			0.02	-2.15
Variance 1			-0.19	-0.00	10.80			0.01	-2.08
Variance 2			-0.28	-0.01	63.23			0.00	-1.82

Notes

Pre-purged 2.75L

Grab Samples

BGWC-23

Inorganics

BGWC-23

Metals

BGWC-23

Radium

Product Name: Low-Flow System

Date: 2018-03-29 13:48:21

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	66 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	61.09 ft

Well Information:		Pumping Information:	
Well ID	BGWC-24	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.774586 L
Well Total Depth	66.09 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	58.2 in
Depth to Water	11.85 ft	Total Volume Pumped	10.32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:27:33	4113.96	20.44	6.71	5037.79	0.30	16.05	0.20	54.19
Last 5	13:31:33	4353.96	20.25	6.71	4961.84	0.25	16.20	0.18	54.65
Last 5	13:35:33	4593.95	20.11	6.72	4987.92	0.25	16.43	0.20	54.50
Last 5	13:39:33	4833.95	20.87	6.71	5068.07	0.40	16.55	0.20	53.94
Last 5	13:43:33	5073.94	20.39	6.70	5102.16	0.32	16.71	0.20	54.55
Variance 0			-0.14	0.00	26.09			0.02	-0.15
Variance 1			0.77	-0.01	80.14			-0.00	-0.55
Variance 2			-0.48	-0.00	34.09			0.00	0.61

Notes

Pre-purged 2 liters

Pre-purged 2 liters.

Grab Samples

BGWC-24

Metals

BGWC-24

Inorganics

BGWC-24
Radium

Product Name: Low-Flow System

Date: 2018-03-28 16:15:01

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	59 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	53.37 ft

Well Information:		Pumping Information:	
Well ID	BGWC-25	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.7433419 L
Well Total Depth	58.37 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	129.96 in
Depth to Water	14.65 ft	Total Volume Pumped	20.64 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:54:21	9360.84	18.52	7.40	403.09	5.26	25.54	0.19	-2.85
Last 5	15:58:21	9600.83	18.52	7.39	402.75	5.48	25.50	0.15	-3.07
Last 5	16:02:21	9840.84	18.35	7.39	403.06	4.85	25.57	0.21	-4.12
Last 5	16:06:21	10080.83	18.69	7.39	404.16	4.96	25.48	0.16	-6.49
Last 5	16:10:21	10320.82	18.36	7.39	401.41	4.65	25.48	0.24	-6.66
Variance 0			-0.17	0.01	0.31			0.06	-1.04
Variance 1			0.34	0.00	1.10			-0.05	-2.37
Variance 2			-0.33	-0.00	-2.75			0.07	-0.16

Notes

Pre-purged 10 liters.

Grab Samples

BGWC-25

Metals

BGWC-25

Inorganics

BGWC-25

Radium

Product Name: Low-Flow System

Date: 2018-03-26 15:20:59

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	61 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	56.03 ft

Well Information:		Pumping Information:	
Well ID	BGWC-30	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7522688 L
Well Total Depth	61.03 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	20.35 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:02:15	480.03	17.72	7.33	2083.24	2.30	20.35	0.29	71.12
Last 5	15:06:15	720.02	17.72	7.31	2076.91	1.52	20.37	0.29	70.95
Last 5	15:10:15	960.01	18.75	7.32	2088.17	1.02	20.35	0.26	69.16
Last 5	15:14:15	1200.01	18.61	7.34	2059.70	0.82	20.36	0.23	69.87
Last 5	15:18:15	1440.00	17.99	7.33	2081.60	0.73	30.36	0.27	69.61
Variance 0			1.03	0.00	11.26			-0.03	-1.79
Variance 1			-0.13	0.02	-28.47			-0.03	0.71
Variance 2			-0.62	-0.01	21.90			0.04	-0.26

Notes

Pre-purged 1 liter.

Grab Samples

BGWC-30

Metals

BGWC-30

Inorganics

BGWC-30

Radium

Product Name: Low-Flow System

Date: 2018-06-12 13:49:17

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	90 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	84.21 ft

Well Information:		Pumping Information:	
Well ID	BGWA-2	Final Pumping Rate	210 mL/min
Well diameter	2 in	Total System Volume	0.886708 L
Well Total Depth	89.21 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.26 in
Depth to Water	54.40 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	13:32:03	240.09	19.59	7.84	326.68	2.32	54.42	0.27	35.15
Last 5	13:36:03	480.03	19.10	7.86	329.60	2.16	54.41	0.22	32.92
Last 5	13:40:03	720.02	19.44	7.86	334.19	1.77	54.42	0.24	30.81
Last 5	13:44:03	960.02	19.61	7.88	337.67	1.32	54.42	0.26	28.74
Last 5	13:48:03	1200.02	19.88	7.88	342.61	1.26	54.42	0.32	27.50
Variance 0			0.33	0.01	4.59			0.02	-2.11
Variance 1			0.18	0.01	3.48			0.03	-2.07
Variance 2			0.26	0.00	4.94			0.05	-1.25

Notes

Pre-purged 1 liter

Grab Samples

BGWA-2

Metals

BGWA-2

Inorganics

BGWA-2

TDS

BGWA-2
Radium

Product Name: Low-Flow System

Date: 2018-06-12 11:28:31

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	100 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	95.1 ft

Well Information:		Pumping Information:	
Well ID	BGWA-29	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.9313423 L
Well Total Depth	100.1 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	46.88 ft	Total Volume Pumped	3.36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	11:10:08	720.03	18.20	7.96	225.45	2.27	46.93	7.14	44.49
Last 5	11:14:09	961.01	18.30	8.01	224.61	2.15	46.93	7.13	41.31
Last 5	11:18:09	1201.01	18.38	8.05	224.37	2.14	46.93	7.21	40.25
Last 5	11:22:09	1441.01	18.70	8.07	224.24	1.78	46.94	7.23	38.19
Last 5	11:26:09	1681.00	18.79	8.09	224.57	1.59	46.93	7.30	36.53
Variance 0			0.07	0.04	-0.24			0.08	-1.06
Variance 1			0.32	0.02	-0.13			0.02	-2.07
Variance 2			0.10	0.02	0.33			0.08	-1.66

Notes

Pre-purged 3 liters

Pre-purged 3 liters.

Grab Samples

BGWA-29

Metals

BGWA-29

Inorganics

BGWC-29
    TDS
BGWA-29
    Radium
Dup-1
    Metals
Dup-1
    Inorganics
Dup-1
    TDS
Dup-1
    Radium

Product Name: Low-Flow System

Date: 2018-06-12 12:49:44

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	100 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	95 ft

Well Information:		Pumping Information:	
Well ID	BGWC-7	Final Pumping Rate	170 mL/min
Well diameter	2 in	Total System Volume	0.9313423 L
Well Total Depth	90.20 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	406.8 in
Depth to Water	46.10 ft	Total Volume Pumped	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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:28:03	8159.86	20.59	7.00	1148.13	0.59	76.14	0.26	-74.23
Last 5	12:32:03	8399.86	20.57	7.00	1147.54	0.46	77.02	0.32	-70.56
Last 5	12:36:03	8639.86	20.56	7.00	1150.39	1.25	77.90	0.34	-68.60
Last 5	12:40:03	8879.86	20.90	7.00	1149.96	1.51	78.76	0.34	-67.76
Last 5	12:44:03	9119.86	20.69	7.00	1151.96	0.43	79.62	0.33	-66.68
Variance 0			-0.01	0.00	2.85			0.01	1.95
Variance 1			0.34	0.00	-0.43			-0.00	0.84
Variance 2			-0.21	-0.00	2.00			-0.01	1.08

Notes

Prepurged 2L. Performing complete evacuation. Water level dropped below the top of the pump. Will sample within 24 hours

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-12 14:33:19

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	86 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	BGWC-8	Final Pumping Rate	175 mL/min
Well diameter	2 in	Total System Volume	0.8688543 L
Well Total Depth	80.01 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	47.20 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:14:58	720.02	21.49	7.67	321.62	5.56	47.20	0.00	6.82
Last 5	14:18:58	960.02	21.60	7.69	321.69	4.72	47.20	0.00	7.53
Last 5	14:22:58	1200.02	21.55	7.69	320.88	4.60	47.21	4.45	8.51
Last 5	14:26:58	1440.02	20.62	7.70	321.43	4.34	47.21	4.41	10.70
Last 5	14:30:58	1680.02	20.34	7.71	330.56	4.08	47.21	4.18	11.38
Variance 0			-0.04	-0.00	-0.81			4.45	0.99
Variance 1			-0.93	0.02	0.55			-0.04	2.18
Variance 2			-0.28	0.00	9.13			-0.22	0.68

Notes

Grab Samples

BGWC-8
Inorganics

BGWC-8
Metals

BGWC-8
Radium

BGWC-8
TDS

Product Name: Low-Flow System

Date: 2018-06-12 12:22:25

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	66 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	456959		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	56 ft

Well Information:		Pumping Information:	
Well ID	BGWC-9	Final Pumping Rate	190 mL/min
Well diameter	2 in	Total System Volume	0.3885359 L
Well Total Depth	61 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	31.52 ft	Total Volume Pumped	20.52 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:57:57	5519.98	19.74	7.53	560.93	5.24	31.55	0.23	-72.08
Last 5	12:01:57	5759.97	20.13	7.53	556.65	5.34	31.55	0.25	-69.83
Last 5	12:05:57	5999.97	20.07	7.52	557.03	4.80	31.54	0.28	-69.91
Last 5	12:09:57	6239.97	20.54	7.52	553.66	4.96	31.55	0.30	-68.59
Last 5	12:13:57	6479.96	19.60	7.51	550.23	4.75	31.55	0.32	-64.23
Variance 0			-0.06	-0.01	0.39			0.02	-0.07
Variance 1			0.47	0.00	-3.37			0.02	1.31
Variance 2			-0.94	-0.01	-3.43			0.02	4.36

Notes

Prepurged 3L

Grab Samples

BGWC-9

Metals

BGWC-9

Inorganics

BGWC-9

TDS

BGWC-9
Radium

Product Name: Low-Flow System

Date: 2018-06-14 11:42:18

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	456959		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	54.7 ft

Well Information:		Pumping Information:	
Well ID	BGWC-10	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.3617554 L
Well Total Depth	59.7 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	177.6 in
Depth to Water	29.15 ft	Total Volume Pumped	12.13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:14:02	3361.03	20.22	7.46	562.59	3.74	43.05	0.92	-70.35
Last 5	11:18:03	3602.02	20.21	7.48	560.98	4.22	43.57	1.03	-64.71
Last 5	11:22:03	3842.02	21.24	7.49	567.60	4.11	43.70	1.07	-67.73
Last 5	11:26:03	4082.01	22.58	7.50	559.82	4.01	43.74	1.04	-67.10
Last 5	11:30:05	4324.02	22.56	7.48	549.62	4.01	43.95	0.91	-76.61
Variance 0			1.03	0.01	6.62			0.04	-3.02
Variance 1			1.34	0.01	-7.77			-0.03	0.63
Variance 2			-0.02	-0.02	-10.20			-0.13	-9.51

Notes

Prepurged 6.5 L

Pressure had dropped to less than 100 ml/ min while trolling, increased pumping rate to 170 ml/ min at 1050. Well took awhile to stabilize

Grab Samples

BGWC-10

Metals

BGWC-10

Inorganics

BGWC-10

TDS

BGWC-10
Radium

Product Name: Low-Flow System

Date: 2018-06-14 11:24:15

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	78 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	73.30 ft

Well Information:		Pumping Information:	
Well ID	BGWC-12	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.833147 L
Well Total Depth	78.30 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	3.12 in
Depth to Water	39.58 ft	Total Volume Pumped	7.48 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	11:02:52	3122.00	20.48	7.35	956.69	5.24	39.84	1.93	70.65
Last 5	11:06:52	3361.99	20.48	7.35	959.84	5.03	39.84	1.91	70.35
Last 5	11:10:52	3601.99	20.31	7.35	959.35	4.97	39.85	1.90	70.16
Last 5	11:14:52	3841.98	20.57	7.35	962.41	4.84	39.84	1.91	69.74
Last 5	11:18:52	4081.99	20.70	7.35	964.61	4.08	39.84	1.90	69.57
Variance 0			-0.18	0.01	-0.49			-0.01	-0.19
Variance 1			0.26	-0.00	3.06			0.01	-0.42
Variance 2			0.13	-0.00	2.20			-0.01	-0.18

Notes

Pre-purged 1 liter.

Grab Samples

BGWC-12

Metals

BGWC-12

Inorganics

BGWC-12

TDS

BGWC-12
Radium

Product Name: Low-Flow System

Date: 2018-06-13 11:22:46

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Micropurge
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	89 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	86.80 ft

Well Information:		Pumping Information:	
Well ID	BGWC-14	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.5872446 L
Well Total Depth	88.80 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	63.24 in
Depth to Water	76.69 ft	Total Volume Pumped	7.62 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	11:04:22	4559.98	20.49	7.31	958.77	0.96	81.36	6.93	68.71
Last 5	11:08:22	4799.97	20.28	7.32	955.91	0.90	81.52	6.92	68.74
Last 5	11:12:22	5039.97	20.13	7.32	956.67	1.48	81.64	7.05	68.56
Last 5	11:16:22	5279.97	20.53	7.32	955.04	1.35	81.87	7.02	68.25
Last 5	11:20:22	5519.96	20.32	7.32	954.58	1.15	81.96	7.09	68.17
Variance 0			-0.15	0.00	0.76			0.14	-0.18
Variance 1			0.40	-0.00	-1.63			-0.03	-0.30
Variance 2			-0.21	0.00	-0.46			0.07	-0.09

Notes

Pre-purged .5 liters. Complete evacuation initiated. Samples to be collected 6/15/18.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-12 15:34:15

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43.99 ft

Well Information:		Pumping Information:	
Well ID	BGWC-16	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.7081711 L
Well Total Depth	48.99 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	15.90 ft	Total Volume Pumped	3.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	15:16:04	240.14	20.13	7.20	850.77	1.98	15.96	0.44	51.18
Last 5	15:20:04	480.06	18.83	7.10	834.02	1.32	16.02	0.21	50.32
Last 5	15:24:04	720.03	18.47	7.05	840.15	1.30	16.05	0.17	49.31
Last 5	15:28:04	960.02	18.35	7.02	850.21	1.44	16.05	0.14	48.86
Last 5	15:32:04	1200.02	18.44	7.01	839.79	1.45	16.06	0.12	48.37
Variance 0			-0.36	-0.05	6.13			-0.04	-1.01
Variance 1			-0.12	-0.03	10.06			-0.03	-0.45
Variance 2			0.09	-0.01	-10.42			-0.02	-0.49

Notes

Pre-purged 2 liters.

Grab Samples

BGWC-16

Metals

BGWC-16

Inorganics

BGWC-16

TDS

BGWC-16

Radium

Product Name: Low-Flow System

Date: 2018-06-14 14:32:48

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	67 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	456959		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	61.0 ft

Well Information:		Pumping Information:	
Well ID	BGWC-17	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3929994 L
Well Total Depth	66.0 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	14.82 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:05:29	1920.03	76.61	7.22	278.45	1.96	14.84	0.08	30.46
Last 5	14:09:29	2160.03	75.48	7.22	279.22	2.13	14.84	0.06	30.45
Last 5	14:13:29	2400.03	75.34	7.23	287.54	2.70	14.84	0.07	29.33
Last 5	14:17:29	2640.03	75.94	7.22	279.00	2.38	14.84	0.04	31.04
Last 5	14:21:29	2880.03	74.80	7.22	278.25	2.66	14.84	0.05	31.71
Variance 0			-0.14	0.00	8.31			0.02	-1.12
Variance 1			0.60	-0.00	-8.54			-0.03	1.72
Variance 2			-1.15	-0.00	-0.75			0.01	0.67

Notes

Prepurged 3 L

Bp controller increased and decreased pumping rates while trolling. Pumping rate stabilized at 120 ml/ min at 1416. Fluctuation of pumping rates taken into account when calculating volume pumped.

Grab Samples

BGWC-17
Metals

BGWC-17
Inorganics

BGWC-17
TDS

BGWC-17
Radium

Product Name: Low-Flow System

Date: 2018-06-14 14:50:14

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	32.82 ft

Well Information:		Pumping Information:	
Well ID	BGWC-18	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.6546101 L
Well Total Depth	37.82 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	13.30 ft	Total Volume Pumped	8.16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	14:30:14	3120.00	20.70	6.62	460.70	5.68	13.34	0.57	58.06
Last 5	14:34:14	3359.99	20.57	6.62	459.03	5.15	13.34	0.57	58.19
Last 5	14:38:14	3599.99	20.35	6.62	458.01	4.65	13.33	0.56	58.48
Last 5	14:42:14	3839.99	20.13	6.62	456.37	4.08	13.33	0.54	58.76
Last 5	14:46:14	4079.98	20.04	6.61	454.35	3.92	13.33	0.47	58.95
Variance 0			-0.22	-0.00	-1.02			-0.01	0.29
Variance 1			-0.23	0.00	-1.64			-0.02	0.28
Variance 2			-0.09	-0.01	-2.03			-0.07	0.19

Notes

Pre-purged 3 liters.

Grab Samples

BGWC-18

Metals

BGWC-18

Inorganics

BGWC-18

TDS

BGWC-18
Radium

Product Name: Low-Flow System

Date: 2018-06-15 10:27:07

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	52.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	465016		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	47.0 ft

Well Information:		Pumping Information:	
Well ID	BGWC-19	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.717098 L
Well Total Depth	52.0 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	3.12 in
Depth to Water	15.18 ft	Total Volume Pumped	4.22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:01:07	720.04	23.00	6.50	425.37	0.56	15.32	0.93	79.63
Last 5	10:05:07	960.02	20.88	6.43	431.46	0.69	15.32	0.85	82.10
Last 5	10:09:08	1201.02	19.87	6.47	432.75	0.79	15.36	0.88	80.64
Last 5	10:13:08	1441.02	19.32	6.46	434.12	0.75	15.38	0.87	81.55
Last 5	10:17:08	1681.02	19.05	6.50	438.21	1.31	15.44	0.81	79.53
Variance 0			-1.01	0.04	1.29			0.03	-1.46
Variance 1			-0.55	-0.00	1.37			-0.01	0.91
Variance 2			-0.27	0.03	4.08			-0.06	-2.02

Notes

Prepurged 2.5 L

Pumping rate dropped while trolling at 0957 below 100 ml/ min. Adjusted rate to 140 ml/min. Change in pumping rate calculated into total volume.

Grab Samples

BGWC-19

TDS

BGWC-19

Inorganics

BGWC-19
Metals
BGWC-19
Radium

Product Name: Low-Flow System

Date: 2018-06-13 16:31:50

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	47 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	456959		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41.9 ft

Well Information:		Pumping Information:	
Well ID	BGWC-20	Final Pumping Rate	260 mL/min
Well diameter	2 in	Total System Volume	0.3037309 L
Well Total Depth	46.9 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	131.88 in
Depth to Water	15.1 ft	Total Volume Pumped	8.18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:42:59	2882.96	47.08	7.20	977.52	--	--	0.17	-52.61
Last 5	15:46:59	3122.95	48.00	7.22	986.15	0.37	26.66	0.00	-65.27
Last 5	15:50:59	3362.96	46.23	7.24	1022.33	0.38	26.42	0.03	-68.86
Last 5	15:54:59	3602.95	44.55	7.25	1026.65	0.29	26.23	0.05	-69.76
Last 5	15:58:59	3842.93	48.11	7.24	977.90	0.35	26.09	0.02	-69.00
Variance 0			-1.77	0.02	36.18			0.03	-3.59
Variance 1			-1.67	0.01	4.32			0.02	-0.90
Variance 2			3.56	-0.00	-48.75			-0.03	0.76

Notes

Prepurged 4L

Pumping rate originally 260 ml/min, changed to 120 ml/ min @ 1543 to stabilize RDO and SpCond

Grab Samples

BGWC-20

Metals

BGWC-20

Inorganics

BGWC-20

TDS

BGWC-20
Radium

Product Name: Low-Flow System

Date: 2018-06-14 12:54:25

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	54 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	48 ft

Well Information:		Pumping Information:	
Well ID	BGWC-21	Final Pumping Rate	165 mL/min
Well diameter	2 in	Total System Volume	0.7260249 L
Well Total Depth	53.35 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	5.64 in
Depth to Water	18.69 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:36:15	480.02	20.95	7.76	369.49	1.56	19.11	0.43	12.45
Last 5	12:40:15	720.02	20.88	7.75	375.86	3.08	19.16	0.35	11.74
Last 5	12:44:15	960.02	20.79	7.73	379.27	3.64	19.16	0.28	10.31
Last 5	12:48:15	1200.02	20.81	7.72	381.95	3.30	19.16	0.25	8.27
Last 5	12:52:15	1440.02	20.92	7.70	383.54	3.49	19.16	0.24	6.81
Variance 0			-0.09	-0.01	3.41			-0.07	-1.43
Variance 1			0.02	-0.01	2.68			-0.02	-2.04
Variance 2			0.11	-0.02	1.59			-0.01	-1.46

Notes

Grab Samples

BGWC-21
Inorganics

BGWC-21
Metals

BGWC-21
Radium

BGWC-21
TDS

Product Name: Low-Flow System

Date: 2018-06-14 10:03:27

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	44 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	BGWC-22	Final Pumping Rate	115 mL/min
Well diameter	2 in	Total System Volume	0.6813906 L
Well Total Depth	43.00 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	5.16 in
Depth to Water	25.80 ft	Total Volume Pumped	3.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	09:44:17	960.02	21.50	6.93	3190.61	2.72	26.22	0.41	73.29
Last 5	09:48:17	1200.02	21.51	6.92	3207.65	1.46	26.22	0.30	71.00
Last 5	09:52:17	1440.02	21.46	6.92	3216.84	0.83	26.22	0.26	69.01
Last 5	09:56:18	1681.02	21.28	6.92	3223.49	0.58	26.23	0.23	67.23
Last 5	10:00:18	1921.27	21.38	6.92	3227.80	0.57	26.23	0.21	65.01
Variance 0			-0.04	-0.00	9.19			-0.05	-1.99
Variance 1			-0.18	0.00	6.65			-0.03	-1.78
Variance 2			0.09	-0.00	4.31			-0.01	-2.22

Notes

Grab Samples

BGWC-22
Inorganics

DUP-2
Inorganics

BGWC-22
Metals

BGWC-22
TDS

DUP-2
TDS

DUP-2
    Metals
BGWC-22
    Radium
BGWC-22
    Extra Radium
DUP-2
    Radium

Product Name: Low-Flow System

Date: 2018-06-13 15:08:12

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	52 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	BGWC-23	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.717098 L
Well Total Depth	51.12 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	17.28 in
Depth to Water	30.85 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:50:07	480.02	22.62	7.24	2587.96	0.71	31.80	0.21	-48.60
Last 5	14:54:07	720.02	22.75	7.23	2596.24	0.80	31.97	0.17	-49.70
Last 5	14:58:07	960.02	22.89	7.21	2629.80	0.72	32.07	0.17	-50.01
Last 5	15:02:07	1200.02	22.89	7.20	2676.24	0.59	32.06	0.17	-49.60
Last 5	15:06:07	1440.02	23.05	7.19	2693.21	0.74	32.06	0.16	-51.46
Variance 0			0.14	-0.01	33.56			-0.01	-0.32
Variance 1			0.00	-0.01	46.44			0.00	0.42
Variance 2			0.15	-0.01	16.97			-0.01	-1.87

Notes

Grab Samples

BGWC-23
Inorganics

BGWC-23
Metals

BGWC-23
Radium

BGWC-23
TDS

Product Name: Low-Flow System

Date: 2018-06-13 11:23:00

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	67 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	61 ft

Well Information:		Pumping Information:	
Well ID	BGWC-24	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.7840493 L
Well Total Depth	66.09 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	55.8 in
Depth to Water	13.51 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:04:03	2160.02	22.52	6.59	5644.19	0.90	17.37	0.12	-45.03
Last 5	11:08:03	2400.02	22.95	6.58	5758.03	0.70	17.65	0.12	-45.28
Last 5	11:12:03	2640.02	22.90	6.59	5808.88	0.66	18.01	0.11	-42.81
Last 5	11:16:03	2880.02	23.03	6.58	5905.44	0.61	18.02	0.10	-40.29
Last 5	11:20:03	3120.02	23.12	6.58	6002.26	0.51	18.16	0.10	-37.02
Variance 0			-0.06	0.00	50.85			-0.01	2.47
Variance 1			0.14	-0.01	96.55			-0.01	2.52
Variance 2			0.09	-0.00	96.82			-0.00	3.27

Notes

Grab Samples

BGWC-24 Inorganics

BGWC-24 Metals

BGWC-24 Radium

BGWC-24

TDS

Product Name: Low-Flow System

Date: 2018-06-14 15:24:06

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	53 ft

Well Information:		Pumping Information:	
Well ID	BGWC-25	Final Pumping Rate	115 mL/min
Well diameter	2 in	Total System Volume	0.7528054 L
Well Total Depth	58.37 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	8.04 in
Depth to Water	22.43 ft	Total Volume Pumped	2.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:06:05	240.02	20.98	7.34	383.87	2.82	22.58	0.04	-122.84
Last 5	15:10:05	480.02	21.01	7.34	383.55	2.85	22.73	0.05	-124.11
Last 5	15:14:05	720.02	21.02	7.35	384.43	2.77	22.89	0.05	-123.69
Last 5	15:18:05	960.02	21.20	7.35	385.56	2.69	23.02	0.05	-125.22
Last 5	15:22:04	1199.94	21.29	7.35	384.05	2.75	23.10	0.06	-124.71
Variance 0			0.01	0.01	0.88			0.01	0.42
Variance 1			0.18	0.00	1.12			0.00	-1.54
Variance 2			0.10	0.00	-1.51			0.01	0.51

Notes

Grab Samples
BGWC-25
    Inorganics
BGWC-25
    Metals
BGWC-25
    Radium

Product Name: Low-Flow System

Date: 2018-06-15 10:06:10

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Ash Pond June 2018	Tubing Diameter	.17 in
Site Name	Bowen	Tubing Length	61 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	56.03 ft

Well Information:		Pumping Information:	
Well ID	BGWC-30	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.7572688 L
Well Total Depth	61.03 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	26.45 ft	Total Volume Pumped	3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000%
Last 5	09:48:07	240.09	22.21	7.24	1576.47	0.44	26.47	0.63	87.53
Last 5	09:52:07	480.03	22.04	7.29	1597.88	0.54	26.46	0.47	84.88
Last 5	09:56:07	720.03	21.94	7.32	1606.31	0.58	26.46	0.45	83.64
Last 5	10:00:07	960.02	21.97	7.34	1628.56	0.52	26.47	0.44	82.57
Last 5	10:04:07	1200.02	22.01	7.35	1652.44	0.51	26.46	0.44	81.94
Variance 0			-0.10	0.03	8.42			-0.02	-1.24
Variance 1			0.03	0.01	22.25			-0.02	-1.06
Variance 2			0.04	0.01	23.88			-0.00	-0.63

Notes

Pre-purged 2 liters.

Grab Samples

BGWC-30

Metals

BGWC-30

Inorganics

BGWC-30

TDS

BGWC-30
Radium

Product Name: Low-Flow System

Date: 2018-10-16 10:18:05

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	87 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	81.5 ft

Well Information:		Pumping Information:	
Well ID	BGWA-2	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.8683177 L
Well Total Depth	86.5 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	61.45 ft	Total Volume Pumped	2.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:02:19	180.09	18.58	7.62	315.51	0.49	61.45	0.68	54.50
Last 5	10:05:19	360.03	18.51	7.65	314.46	0.69	61.46	0.50	53.34
Last 5	10:08:19	540.03	18.47	7.69	314.35	0.61	61.46	0.40	51.95
Last 5	10:11:19	720.02	18.47	7.71	314.99	0.58	61.46	0.36	51.15
Last 5	10:14:19	900.01	18.49	7.73	315.75	0.43	61.46	0.33	50.33
Variance 0			-0.04	0.04	-0.11			-0.10	-1.39
Variance 1			-0.00	0.02	0.64			-0.04	-0.80
Variance 2			0.02	0.02	0.76			-0.03	-0.82

Notes

Prepurged 2L

Well performed great

Grab Samples

BGWA-2

Metals

BGWA-2

Inorganics

BGWA-2
Radium
DUP-1
Metals
DUP-1
Inorganics
DUP-1
Radium

Product Name: Low-Flow System

Date: 2018-10-16 12:00:05

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	55.3 ft

Well Information:		Pumping Information:	
Well ID	BGWA-6	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.7478054 L
Well Total Depth	60.3 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	49.3 ft	Total Volume Pumped	1.95 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:45:18	180.10	19.01	7.36	513.43	1.81	49.39	0.38	15.76
Last 5	11:48:18	360.03	19.30	7.36	513.07	1.72	49.40	0.30	14.92
Last 5	11:51:18	540.02	19.18	7.36	512.61	1.53	49.40	0.26	14.87
Last 5	11:54:18	720.02	19.14	7.36	512.73	1.01	49.40	0.25	14.98
Last 5	11:57:18	900.01	19.00	7.36	513.07	0.83	49.40	0.24	15.05
Variance 0			-0.12	-0.00	-0.46			-0.04	-0.05
Variance 1			-0.05	-0.00	0.12			-0.01	0.11
Variance 2			-0.13	0.00	0.34			-0.01	0.07

Notes

Prepurged 2L

Well performed well

Grab Samples

BGWA-6

Metals

BGWA-6

Inorganics

BGWA-6

Radium

Product Name: Low-Flow System

Date: 2018-10-16 12:08:29

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dediated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Oct. 2018 AP Sampling	Tubing Diameter	.17 in
Site Name	Plant Bowen'	Tubing Length	100 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	95.10 ft

Well Information:		Pumping Information:	
Well ID	BGWA-29	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.9263423 L
Well Total Depth	100.1 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	50.09 ft	Total Volume Pumped	2.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:48:41	240.12	18.70	7.45	215.09	1.62	50.13	5.88	69.23
Last 5	11:52:41	480.02	18.51	7.50	216.12	1.51	50.12	5.97	61.65
Last 5	11:56:41	720.02	18.38	7.56	216.55	1.43	50.14	6.03	58.23
Last 5	12:00:41	960.02	18.34	7.60	217.08	1.40	50.14	6.10	55.62
Last 5	12:04:41	1200.02	18.21	7.64	216.84	1.31	50.13	6.15	54.28
Variance 0			-0.13	0.06	0.43			0.06	-3.42
Variance 1			-0.05	0.04	0.53			0.07	-2.61
Variance 2			-0.13	0.04	-0.24			0.06	-1.33

Notes

Pre-purged 2 liters.

Grab Samples

BGWA-29

Metals

BGWA-29

Inorganics

BGWA-29

Radium

Product Name: Low-Flow System

Date: 2018-10-17 11:41:52

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	88 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	82.8 ft

Well Information:		Pumping Information:	
Well ID	BGWC-7	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.8727813 L
Well Total Depth	87.8 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	396.72 in
Depth to Water	45.83 ft	Total Volume Pumped	17.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:22:03	5519.96	19.01	7.09	1139.40	0.75	76.22	0.26	-90.95
Last 5	11:26:03	5759.95	19.17	7.11	1135.72	0.46	76.81	0.27	-93.26
Last 5	11:30:03	5999.96	19.15	7.12	1135.91	0.54	77.56	0.29	-96.02
Last 5	11:34:03	6239.95	19.07	7.13	1133.44	0.37	78.18	0.28	-98.22
Last 5	11:38:03	6479.94	18.92	7.13	1135.11	0.50	78.89	0.29	-100.90
Variance 0			-0.02	0.01	0.19			0.02	-2.76
Variance 1			-0.07	0.00	-2.47			-0.01	-2.20
Variance 2			-0.15	0.01	1.68			0.01	-2.68

Notes

Pre-purged 7L

Evacuated to 1 ft below top of screen. Will sample tomorrow.

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-16 15:25:26

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dediated
Company Name	Resolute	Tubing Type	LDPE
Project Name	Oct. 2018 AP Sampling	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	80 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	75.20 ft

Well Information:		Pumping Information:	
Well ID	BGWC-8	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.8370739 L
Well Total Depth	80.20 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	47.06 ft	Total Volume Pumped	14.56 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:06:41	5279.95	18.60	7.74	367.02	5.58	47.08	3.68	71.62
Last 5	15:10:41	5519.95	18.60	7.75	369.92	4.99	47.09	3.67	70.74
Last 5	15:14:41	5759.95	19.05	7.75	371.24	4.88	47.08	3.59	70.77
Last 5	15:18:41	5999.95	18.80	7.75	371.77	4.98	47.08	3.53	71.09
Last 5	15:22:41	6239.95	18.57	7.74	375.42	4.31	47.09	3.54	71.47
Variance 0			0.45	-0.01	1.32			-0.09	0.03
Variance 1			-0.25	0.00	0.53			-0.06	0.32
Variance 2			-0.23	-0.00	3.65			0.01	0.38

Notes

Pre-purged 4 liters.

Grab Samples

BGWC-8

Metals

BGWC-8

Inorganics

BGWC-8

Radium

Product Name: Low-Flow System

Date: 2018-10-17 13:11:04

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	64 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58.94 ft

Well Information:		Pumping Information:	
Well ID	BGWC-9	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.765659 L
Well Total Depth	63.94 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	31.72 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:52:35	720.02	18.65	7.27	646.55	0.94	31.76	0.20	-90.91
Last 5	12:56:35	960.02	18.66	7.29	624.80	0.96	31.76	0.20	-94.51
Last 5	13:00:35	1200.02	18.72	7.31	623.11	0.90	31.78	0.15	-97.85
Last 5	13:04:35	1440.01	18.61	7.33	616.78	0.87	31.76	0.14	-98.77
Last 5	13:08:35	1680.01	19.01	7.34	614.73	0.77	31.75	0.13	-102.18
Variance 0			0.06	0.01	-1.70			-0.04	-3.34
Variance 1			-0.11	0.02	-6.33			-0.02	-0.92
Variance 2			0.39	0.01	-2.05			-0.00	-3.41

Notes

Pre-purged 1L

Grab Samples

BCWC-9

Metals

BGWC-9

Inorganics

BGWC-9

Radium

Product Name: Low-Flow System

Date: 2018-10-18 12:04:39

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	54.8 ft

Well Information:		Pumping Information:	
Well ID	BGWC-10	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7478054 L
Well Total Depth	59.8 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	217.08 in
Depth to Water	29.70 ft	Total Volume Pumped	18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	11:46:22	7694.84	17.97	7.22	575.58	0.49	47.05	1.52	-3.74
Last 5	11:50:22	7934.83	18.08	7.24	574.63	0.53	47.20	1.48	-6.94
Last 5	11:54:22	8174.83	18.12	7.21	573.98	0.51	47.53	1.43	-9.14
Last 5	11:58:22	8414.82	18.11	7.21	574.10	0.53	47.64	1.38	-12.50
Last 5	12:02:24	8656.81	18.12	7.20	574.11	0.39	47.79	1.33	-14.81
Variance 0			0.04	-0.02	-0.65			-0.05	-2.20
Variance 1			-0.01	0.00	0.12			-0.05	-3.36
Variance 2			0.01	-0.02	0.01			-0.05	-2.31

Notes

Pre-purged 1L

Grab Samples

BGWC-10

Metals

BGWC-10

Inorganics

BGWC-10

Radium

Product Name: Low-Flow System

Date: 2018-10-17 16:00:03

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	78 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	73.3 ft

Well Information:		Pumping Information:	
Well ID	BGWC-12	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.828147 L
Well Total Depth	78.3 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	6.24 in
Depth to Water	39.88 ft	Total Volume Pumped	4.48 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:41:46	960.02	19.64	7.40	961.53	0.82	40.30	1.87	-66.04
Last 5	15:45:46	1200.02	19.60	7.40	962.12	0.98	40.33	1.78	-50.38
Last 5	15:49:46	1440.01	19.59	7.39	965.76	0.99	40.34	1.73	-40.74
Last 5	15:53:46	1680.00	19.70	7.40	965.32	1.06	40.34	1.68	-33.86
Last 5	15:57:46	1920.01	19.24	7.40	972.03	1.17	40.40	1.68	-28.18
Variance 0			-0.01	-0.01	3.64			-0.05	9.64
Variance 1			0.11	0.00	-0.44			-0.05	6.88
Variance 2			-0.46	0.00	6.71			-0.01	5.68

Notes

Grab Samples
BGWC-12
Metals
BGWC-12
Inorganics
BGWC-12
Radium

Product Name: Low-Flow System

Date: 2018-10-17 14:54:14

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	Bladder
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	90 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	87.0 ft

Well Information:		Pumping Information:	
Well ID	BGWC-14	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.881708 L
Well Total Depth	89.02 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	62.64 in
Depth to Water	73.80 ft	Total Volume Pumped	3.96 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:36:23	1200.01	19.81	7.35	910.54	2.16	77.39	4.02	8.21
Last 5	14:40:23	1440.01	19.93	7.36	909.60	2.71	77.91	4.02	9.29
Last 5	14:44:23	1680.01	20.30	7.35	905.62	2.51	78.41	4.02	11.29
Last 5	14:48:23	1920.00	20.31	7.35	905.85	2.26	78.88	4.03	12.46
Last 5	14:52:23	2160.00	20.20	7.38	909.09	2.97	79.02	4.03	12.78
Variance 0			0.37	-0.01	-3.98			0.00	2.00
Variance 1			0.01	0.00	0.23			0.02	1.17
Variance 2			-0.11	0.03	3.23			0.00	0.32

Notes

Evacuating to top of screen (79.02)

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-18 13:54:39

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	34.6 ft

Well Information:		Pumping Information:	
Well ID	BGWC-16	Final Pumping Rate	125 mL/min
Well diameter	2 in	Total System Volume	0.6585369 L
Well Total Depth	49.6 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	17.06 ft	Total Volume Pumped	2.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:34:07	240.10	19.10	6.75	818.47	0.54	17.13	0.61	40.21
Last 5	13:38:07	480.02	18.91	6.72	819.20	0.37	17.15	0.55	41.02
Last 5	13:42:07	720.02	18.82	6.71	819.02	0.36	17.16	0.35	40.81
Last 5	13:46:07	960.01	18.79	6.68	819.70	0.33	17.17	0.21	41.90
Last 5	13:50:07	1200.04	18.82	6.70	818.70	0.37	17.16	0.16	41.36
Variance 0			-0.09	-0.02	-0.17			-0.19	-0.21
Variance 1			-0.03	-0.02	0.67			-0.15	1.09
Variance 2			0.03	0.01	-0.99			-0.04	-0.54

Notes

Pre-purged 1L

Grab Samples

BGWC-16

Metals

BGWC-16

Inorganics

BGWC-16

Radium

DUP-2
Metals
DUP-2
Inorganics
DUP-2
Radiums
BGWC- 16
Radium(2nd Volume)

Product Name: Low-Flow System

Date: 2018-10-17 15:58:36

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	66 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	61 ft

Well Information:		Pumping Information:	
Well ID	BGWC-17	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.774586 L
Well Total Depth	66 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	19.16 ft	Total Volume Pumped	2.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:43:48	180.04	19.85	7.38	627.55	2.43	19.19	0.19	30.02
Last 5	15:46:48	360.03	19.63	7.38	629.83	0.86	19.19	0.16	36.67
Last 5	15:49:48	540.02	19.49	7.37	630.65	0.71	19.19	0.15	42.67
Last 5	15:52:48	720.02	19.36	7.37	632.65	0.75	19.19	0.14	47.08
Last 5	15:55:48	900.01	19.26	7.37	632.97	0.51	19.19	0.13	50.32
Variance 0			-0.14	-0.00	0.82			-0.00	5.99
Variance 1			-0.14	-0.00	2.00			-0.01	4.42
Variance 2			-0.10	-0.00	0.31			-0.01	3.23

Notes

Prepurged 0.5 L

Well performed perfectly

Grab Samples

BGWC-17

Metals

BGWC-17

Inorganics

BGWC-17

Radium

Product Name: Low-Flow System

Date: 2018-10-18 15:35:05

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	33.0 ft

Well Information:		Pumping Information:	
Well ID	BGWC-18	Final Pumping Rate	145 mL/min
Well diameter	2 in	Total System Volume	0.6496101 L
Well Total Depth	38.0 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	14.31 ft	Total Volume Pumped	4.06 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:17:02	720.01	18.99	6.65	533.96	1.57	14.38	0.67	33.58
Last 5	15:21:02	960.02	18.93	6.67	532.34	1.09	14.38	0.57	33.30
Last 5	15:25:03	1201.01	19.02	6.66	530.28	0.85	14.39	0.47	33.95
Last 5	15:29:03	1441.00	18.88	6.66	530.48	0.93	14.38	0.41	34.43
Last 5	15:33:03	1680.99	18.76	6.67	529.93	0.88	14.38	0.36	35.65
Variance 0			0.10	-0.01	-2.06			-0.09	0.65
Variance 1			-0.14	-0.00	0.20			-0.06	0.48
Variance 2			-0.12	0.01	-0.54			-0.04	1.22

Notes

Pre-purged 1L.

Grab Samples

BGWC-18

Metals

BGWC-18

Inorganics

BGWC-18

Radium

Product Name: Low-Flow System

Date: 2018-10-19 09:31:32

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	55 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	49.70 ft

Well Information:		Pumping Information:	
Well ID	BGWC-19	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.7254883 L
Well Total Depth	54.70 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	16.03 ft	Total Volume Pumped	2.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	09:12:35	240.11	17.61	6.49	514.57	0.42	16.35	1.16	113.61
Last 5	09:16:35	480.02	17.58	6.43	523.36	0.36	16.40	0.74	111.45
Last 5	09:20:35	720.02	17.58	6.40	527.74	0.35	16.42	0.44	109.33
Last 5	09:24:35	960.01	17.63	6.42	529.01	0.31	16.42	0.32	106.95
Last 5	09:28:35	1200.01	17.56	6.38	529.85	0.39	16.43	0.26	107.86
Variance 0			0.01	-0.02	4.38			-0.31	-2.11
Variance 1			0.05	0.02	1.26			-0.11	-2.38
Variance 2			-0.07	-0.04	0.84			-0.06	0.91

Notes

Pre-purged 1L

Grab Samples

BGWC-19

Metals

BGWC-19

Inorganics

BGWC-19

Radium

BGWC-19
    Radium (2nd Volume)
DUP-3
    Metals
DUP-3
    Inorganics
DUP-3
    Radium

Product Name: Low-Flow System

Date: 2018-10-22 10:11:38

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	44.74 ft

Well Information:		Pumping Information:	
Well ID	BGWC-20	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.7031711 L
Well Total Depth	49.74 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	90.36 in
Depth to Water	15.67 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	09:53:42	1919.98	17.63	6.88	1493.18	1.18	22.33	0.16	64.96
Last 5	09:57:42	2159.99	17.45	6.91	1492.68	0.67	22.72	0.16	63.04
Last 5	10:01:42	2399.98	17.63	6.91	1509.47	0.50	22.95	0.15	61.30
Last 5	10:05:42	2639.97	17.56	6.92	1514.18	0.79	23.10	0.15	59.80
Last 5	10:09:42	2879.97	17.56	6.93	1526.42	0.34	23.20	0.14	58.30
Variance 0			0.18	0.01	16.79			-0.01	-1.73
Variance 1			-0.07	0.01	4.71			-0.00	-1.51
Variance 2			-0.01	0.01	12.24			-0.01	-1.50

Notes

Pre-purged 1L

Grab Samples

BGWC-20

Metals

BGWC-20

Inorganics

BGWC-20

Radium

Product Name: Low-Flow System

Date: 2018-10-19 12:53:55

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	54 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	48.35 ft

Well Information:		Pumping Information:	
Well ID	BGWC-21	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7210249 L
Well Total Depth	53.35 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	6.6 in
Depth to Water	20.25 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:35:34	240.09	19.48	7.45	378.48	2.15	20.70	0.93	61.76
Last 5	12:39:34	480.03	19.41	7.52	382.47	1.53	20.74	0.59	59.16
Last 5	12:43:34	720.02	19.40	7.54	385.76	0.99	20.80	0.32	57.69
Last 5	12:47:34	960.01	19.28	7.58	388.48	1.13	20.80	0.22	54.47
Last 5	12:51:34	1200.01	19.23	7.57	392.44	1.45	20.80	0.17	51.65
Variance 0			-0.02	0.03	3.28			-0.27	-1.48
Variance 1			-0.11	0.03	2.72			-0.10	-3.22
Variance 2			-0.05	-0.00	3.96			-0.05	-2.81

Notes

Grab Samples
BGWC-21
    Metals
BGWC-21
    Inorganics
BGWC-21
    Radium

Product Name: Low-Flow System

Date: 2018-10-22 14:15:07

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	43.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	37.9 ft

Well Information:		Pumping Information:	
Well ID	BGWC-22	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.6719272 L
Well Total Depth	42.9 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	5.76 in
Depth to Water	26.25 ft	Total Volume Pumped	3.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:57:24	720.03	20.19	6.86	3454.87	0.40	26.75	1.25	31.37
Last 5	14:01:24	960.02	20.15	6.83	3489.69	0.60	26.70	0.54	30.33
Last 5	14:05:24	1200.01	20.17	6.83	3498.26	0.38	26.71	0.37	29.45
Last 5	14:09:24	1440.00	20.08	6.81	3501.55	0.36	26.73	0.30	28.65
Last 5	14:13:25	1681.00	20.17	6.81	3507.50	0.32	26.73	0.26	27.41
Variance 0			0.02	-0.01	8.58			-0.17	-0.89
Variance 1			-0.09	-0.01	3.28			-0.07	-0.79
Variance 2			0.09	-0.00	5.96			-0.03	-1.25

Notes

Grab Samples
BGWC-22
    Metals
BGWC-22
    Inorganics
BGWC-22
    Radium

Product Name: Low-Flow System

Date: 2018-10-22 16:33:10

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	52 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	BGWC-23	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.712098 L
Well Total Depth	51.12 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	18.24 in
Depth to Water	30.85 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	16:17:10	900.01	19.01	7.14	2558.42	1.72	32.33	0.63	-17.51
Last 5	16:20:17	1087.01	18.90	7.12	2654.20	1.22	32.32	0.46	-17.28
Last 5	16:23:17	1267.00	18.78	7.12	2745.58	0.99	32.34	0.40	-17.23
Last 5	16:26:17	1447.00	18.78	7.12	2786.02	1.09	32.35	0.39	-17.79
Last 5	16:29:17	1626.99	18.69	7.11	2822.97	0.74	32.37	0.38	-18.51
Variance 0			-0.12	-0.00	91.38			-0.06	0.04
Variance 1			-0.00	-0.00	40.44			-0.01	-0.56
Variance 2			-0.09	-0.01	36.96			-0.01	-0.71

Notes

Grab Samples
BGWC-23
Metals
BGWC-23
TDS
BGWC-23
Radium

Product Name: Low-Flow System

Date: 2018-10-22 13:23:16

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	68 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	61 ft

Well Information:		Pumping Information:	
Well ID	BGWC-24	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.7835128 L
Well Total Depth	66.09 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	55.92 in
Depth to Water	14.51 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	13:04:04	2162.97	21.19	6.62	6351.25	0.63	18.42	0.10	-12.57
Last 5	13:08:04	2402.97	21.20	6.62	6409.17	0.61	18.62	0.12	-11.05
Last 5	13:12:04	2642.96	21.02	6.62	6461.95	0.47	18.87	0.12	-9.45
Last 5	13:16:04	2882.95	21.01	6.61	6484.18	0.62	19.02	0.10	-7.85
Last 5	13:20:04	3122.95	21.19	6.61	6501.66	0.56	19.17	0.11	-6.77
Variance 0			-0.18	-0.00	52.79			0.00	1.60
Variance 1			-0.01	-0.00	22.22			-0.01	1.59
Variance 2			0.18	-0.00	17.49			0.00	1.08

Notes

Water level drawdown at 0.3 ft

Grab Samples

BGWC-24

Metals

BGWC-24

TDS

BGWC-24

Radium

Product Name: Low-Flow System

Date: 2018-10-22 12:51:40

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	59 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	53.37 ft

Well Information:		Pumping Information:	
Well ID	BGWC-25	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.7433419 L
Well Total Depth	58.37 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	88.8 in
Depth to Water	17.57 ft	Total Volume Pumped	8.32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:34:01	2879.96	19.05	7.21	391.48	0.60	24.30	0.10	-40.67
Last 5	12:38:01	3119.96	19.04	7.21	392.27	0.63	24.50	0.11	-42.64
Last 5	12:42:01	3359.95	19.10	7.23	391.75	0.60	24.70	0.12	-45.99
Last 5	12:46:01	3599.95	19.10	7.24	390.83	0.67	24.85	0.12	-48.78
Last 5	12:50:01	3839.94	19.09	7.25	391.37	0.66	24.97	0.13	-51.54
Variance 0			0.06	0.03	-0.52			0.01	-3.35
Variance 1			-0.00	0.01	-0.92			0.00	-2.79
Variance 2			-0.01	0.00	0.53			0.01	-2.76

Notes

Pre-purged 1L

Grab Samples

BGWC-25

Metals

BGWC-25

Inorganics

BGWC-25

Radium

Product Name: Low-Flow System

Date: 2018-10-22 10:59:02

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	62 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	56 ft

Well Information:		Pumping Information:	
Well ID	BGWC-30	Final Pumping Rate	225 mL/min
Well diameter	2 in	Total System Volume	0.7567322 L
Well Total Depth	61.03 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	30.04 ft	Total Volume Pumped	16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:26:41	2399.96	21.05	7.35	1768.44	6.47	30.05	1.55	69.35
Last 5	10:31:41	2699.96	20.96	7.35	1766.85	5.93	30.05	1.55	69.35
Last 5	10:41:41	3299.94	21.23	7.35	1756.53	4.11	30.05	1.62	69.42
Last 5	10:51:41	3899.92	21.57	7.35	1743.24	3.50	30.05	1.63	70.53
Last 5	10:56:41	4199.91	21.50	7.35	1744.27	2.89	30.05	1.65	71.78
Variance 0			0.27	-0.00	-10.32			0.07	0.07
Variance 1			0.34	-0.00	-13.29			0.00	1.11
Variance 2			-0.08	0.00	1.03			0.03	1.25

Notes

Prepurged 2 L

Grab Samples

BGWC-30

Metals

BGWC-30

TDS

BGWC-30

Radium

Product Name: Low-Flow System

Date: 2018-10-18 15:24:05

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dediated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	50 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45.14 ft

Well Information:		Pumping Information:	
Well ID	BGWC-31	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7031711 L
Well Total Depth	50.14 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	18.41 ft	Total Volume Pumped	48.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:02:19	18492.00	18.92	7.15	797.45	11.30	18.65	0.02	-75.61
Last 5	15:06:19	18732.00	18.94	7.14	808.23	11.50	18.65	0.02	-75.27
Last 5	15:10:19	18972.00	19.05	7.15	803.39	9.67	18.66	0.02	-75.95
Last 5	15:14:19	19212.00	19.05	7.16	799.68	9.48	18.65	0.02	-76.38
Last 5	15:18:19	19452.00	18.83	7.16	801.99	9.42	18.65	0.02	-76.31
Variance 0			0.11	0.00	-4.84			-0.00	-0.68
Variance 1			-0.00	0.01	-3.71			0.00	-0.43
Variance 2			-0.21	-0.00	2.32			0.00	0.07

Notes

Pre-purged 5 liters. Trolled for 5+ hours. PR gave clearance to sample under 10ntu. Three readings under 10 documented.

Grab Samples

BGWC-31

Metals

BGWC-31

Inorganics

BGWC-31

Radium

Product Name: Low-Flow System

Date: 2018-10-22 15:00:22

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	Bladder Pump
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	53 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	BGWC-32	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.4265614 L
Well Total Depth	50.95 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	46.8 in
Depth to Water	34.65 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	14:44:34	1081.00	18.11	7.23	1618.00	1.98	37.75	1.08	-2.94
Last 5	14:47:34	1261.00	18.08	7.23	1618.50	2.32	38.10	1.11	-2.47
Last 5	14:50:34	1440.99	18.07	7.23	1617.43	2.08	38.34	1.13	-1.94
Last 5	14:53:34	1620.99	18.03	7.22	1627.57	2.21	38.49	1.12	-1.38
Last 5	14:56:37	1804.01	18.04	7.22	1650.22	2.06	38.55	1.05	-0.64
Variance 0			-0.02	-0.00	-1.07			0.01	0.52
Variance 1			-0.03	-0.00	10.14			-0.01	0.57
Variance 2			0.01	-0.01	22.65			-0.07	0.74

Notes

Grab Samples
BGWC-32
    Metals
BGWC-32
    TDS
BGWC-32
    Radium

Product Name: Low-Flow System

Date: 2018-10-19 12:43:36

Project Information:		Pump Information:	
Operator Name	Kevin Stephenson	Pump Model/Type	QED Dediated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	80 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	74.95 ft

Well Information:		Pumping Information:	
Well ID	BGWC-34D	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.8370739 L
Well Total Depth	79.95 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	131.64 in
Depth to Water	15.60 ft	Total Volume Pumped	16.28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	12:22:38	7926.71	20.39	7.41	731.97	1.53	26.17	5.52	15.73
Last 5	12:26:38	8166.71	19.99	7.41	732.30	1.51	26.27	5.90	16.63
Last 5	12:30:38	8406.71	20.12	7.41	731.04	1.05	26.38	6.15	16.34
Last 5	12:34:38	8646.71	19.82	7.41	731.51	1.21	26.49	6.22	17.01
Last 5	12:38:38	8886.71	19.79	7.42	732.68	0.94	26.57	5.89	16.41
Variance 0			0.13	0.00	-1.26			0.25	-0.29
Variance 1			-0.29	0.00	0.47			0.06	0.66
Variance 2			-0.03	0.00	1.16			-0.32	-0.59

Notes

Pre-purged 2 liters.

Grab Samples

BGWC-34D

Metals

BGWC-34D

Inorganics

BGWC-34D

Radium

Product Name: Low-Flow System

Date: 2018-10-22 16:03:42

Project Information:		Pump Information:	
Operator Name	Audrey Crafton	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	78 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	553835		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	73.0 ft

Well Information:		Pumping Information:	
Well ID	BGWC-35D	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.828147 L
Well Total Depth	78.0 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	8.52 in
Depth to Water	27.44 ft	Total Volume Pumped	6.72 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	15:45:51	2399.98	19.64	7.11	2567.59	6.90	28.15	0.12	-102.03
Last 5	15:49:51	2639.97	19.65	7.12	2572.08	5.89	28.14	0.11	-104.76
Last 5	15:53:51	2879.97	19.75	7.13	2574.47	4.68	28.14	0.10	-106.45
Last 5	15:57:51	3119.96	19.76	7.14	2591.00	4.65	28.15	0.10	-106.82
Last 5	16:01:50	3359.95	19.80	7.15	2600.33	4.02	28.15	0.06	-106.52
Variance 0			0.10	0.01	2.39			-0.01	-1.69
Variance 1			0.01	0.01	16.53			-0.00	-0.37
Variance 2			0.03	0.01	9.33			-0.04	0.30

Notes

Pre-purged 2.5L. Initial turbidity was 33 NTU

Grab Samples

BGWC-35D

Metals

BGWC-35D

Inorganics

BGWC-35D

Radium

Product Name: Low-Flow System

Date: 2018-10-17 10:51:01

Project Information:		Pump Information:	
Operator Name	Veronica Fay	Pump Model/Type	QED Dedicated
Company Name	Resolute	Tubing Type	LDPE
Project Name	October 2018 AP Sampling	Tubing Diameter	0.17 in
Site Name	Plant Bowen	Tubing Length	97 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	588863		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	95.56 ft

Well Information:		Pumping Information:	
Well ID	BGWC-36D	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.912952 L
Well Total Depth	96.56 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	33.17 ft	Total Volume Pumped	8.16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:32:08	3119.94	21.38	7.43	2108.02	5.72	33.17	0.11	79.70
Last 5	10:36:08	3359.93	21.38	7.44	2103.51	5.13	33.17	0.11	79.66
Last 5	10:40:08	3599.92	21.23	7.44	2100.97	4.66	33.17	0.11	79.65
Last 5	10:44:08	3839.91	21.20	7.44	2097.73	4.42	33.17	0.11	79.49
Last 5	10:48:08	4079.90	21.22	7.44	2096.98	4.28	33.17	0.11	79.37
Variance 0			-0.15	-0.00	-2.55			-0.00	-0.01
Variance 1			-0.03	0.00	-3.24			0.00	-0.16
Variance 2			0.02	-0.00	-0.75			-0.00	-0.12

Notes

Prepurged 2L

Well performed well

Grab Samples

BGWC-36D

Metals

BGWC-36D

Inorganics

BGWC-36D
Radium

Product Name: Low-Flow System

Date: 2018-11-29 11:13:14

Project Information:		Pump Information:	
Operator Name	Robert Mull	Pump Model/Type	Bladder Pump
Company Name	Resolute Env	Tubing Type	LDPE
Project Name	Nov GW Sampling	Tubing Diameter	.17 in
Site Name	Plant Bowen	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	73 ft

Well Information:		Pumping Information:	
Well ID	BGWC-35D	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.5470738 L
Well Total Depth	78 ft	Calculated Sample Rate	240 sec
Screen Length	10 ft	Stabilization Drawdown	9.48 in
Depth to Water	26.36 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			+/- 1000%	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000%
Last 5	10:55:02	4079.90	16.11	7.20	2798.21	5.00	27.11	0.15	-227.04
Last 5	10:59:02	4319.89	16.06	7.22	2792.22	5.40	27.12	0.14	-226.84
Last 5	11:03:02	4559.88	16.02	7.23	2799.58	4.62	27.12	0.12	-227.22
Last 5	11:07:02	4799.87	16.22	7.23	2803.27	3.90	27.13	0.13	-226.15
Last 5	11:11:02	5039.86	16.17	7.24	2803.93	4.92	27.15	0.12	-223.37
Variance 0			-0.05	0.01	7.36			-0.02	-0.38
Variance 1			0.20	0.01	3.69			0.01	1.07
Variance 2			-0.05	0.01	0.67			-0.01	2.78

Notes

Grab Samples
BGWC-35D
Molybdenum only

APPENDIX B
Statistical Analyses

Detection Monitoring Program Statistical Analysis Package

Plant Bowen Ash Pond 1 (AP-1)

June and October 2018 events

(AM 01 and AM 02)

Table B-1
Detection Monitoring Prediction Limit Comparison
Plant Bowen, Bartow County, Georgia

Parameter	Well ID	Upper PL	Lower PL	Jun 12-15, 2018	Oct 16-22, 2018
Boron (mg/L)	BGWC-7	0.05	-	1.8	1.9
Boron (mg/L)	BGWC-8	0.05	-	0.074	0.16
Boron (mg/L)	BGWC-9	0.05	-	0.56	0.61
Boron (mg/L)	BGWC-10	0.05	-	0.54	0.49
Boron (mg/L)	BGWC-12	0.05	-	1	1
Boron (mg/L)	BGWC-14	0.05	-	0.95	0.86
Boron (mg/L)	BGWC-16	0.05	-	1.3	1.3
Boron (mg/L)	BGWC-17	0.05	-	1.4	1.4
Boron (mg/L)	BGWC-18	0.05	-	0.75	0.8
Boron (mg/L)	BGWC-19	0.05	-	0.44	0.65
Boron (mg/L)	BGWC-20	0.05	-	3.6	3.6
Boron (mg/L)	BGWC-21	0.05	-	ND (0.035 J)	ND (0.028 J)
Boron (mg/L)	BGWC-22	0.05	-	11	16.1
Boron (mg/L)	BGWC-23	0.05	-	8.3	9
Boron (mg/L)	BGWC-24	0.05	-	30.1	44.7
Boron (mg/L)	BGWC-25	0.05	-	ND (0.017 J)	ND (0.03 J)
Boron (mg/L)	BGWC-30	0.05	-	8.5	9.5
Calcium (mg/L)	BGWC-7	46.8	-	151	154
Calcium (mg/L)	BGWC-8	46.8	-	38.1	44.8
Calcium (mg/L)	BGWC-9	46.8	-	53.4	63
Calcium (mg/L)	BGWC-10	46.8	-	58.4	57.8
Calcium (mg/L)	BGWC-12	46.8	-	109	110
Calcium (mg/L)	BGWC-14	46.8	-	113	111
Calcium (mg/L)	BGWC-16	46.8	-	104	112
Calcium (mg/L)	BGWC-17	46.8	-	65.7	69.7
Calcium (mg/L)	BGWC-18	46.8	-	53.1	60.4
Calcium (mg/L)	BGWC-19	46.8	-	49.7	63.1
Calcium (mg/L)	BGWC-20	46.8	-	234	241
Calcium (mg/L)	BGWC-21	46.8	-	39.4	40.6
Calcium (mg/L)	BGWC-22	46.8	-	482	575
Calcium (mg/L)	BGWC-23	46.8	-	385	424
Calcium (mg/L)	BGWC-24	46.8	-	970	1150
Calcium (mg/L)	BGWC-25	46.8	-	44.8	52.2
Calcium (mg/L)	BGWC-30	46.8	-	198	230
Chloride (mg/L)	BGWC-7	3.85	-	10.8	11.7
Chloride (mg/L)	BGWC-8	3.85	-	2.3	2.6
Chloride (mg/L)	BGWC-9	3.85	-	21.3	29.4
Chloride (mg/L)	BGWC-10	3.85	-	23.1	26.9
Chloride (mg/L)	BGWC-12	3.85	-	30.5	30.7
Chloride (mg/L)	BGWC-14	3.85	-	33.6	ND (35.1 J)
Chloride (mg/L)	BGWC-16	3.85	-	27.2	25.2
Chloride (mg/L)	BGWC-17	3.85	-	33.3	41.8
Chloride (mg/L)	BGWC-18	3.85	-	7.3	10.9
Chloride (mg/L)	BGWC-19	3.85	-	9.3	ND (15.3 J)
Chloride (mg/L)	BGWC-20	3.85	-	150	149
Chloride (mg/L)	BGWC-21	3.85	-	3.3	ND (4.1 J)

Table B-1
Detection Monitoring Prediction Limit Comparison
Plant Bowen, Bartow County, Georgia

Parameter	Well ID	Upper PL	Lower PL	Jun 12-15, 2018	Oct 16-22, 2018
Chloride (mg/L)	BGWC-22	3.85	-	725	827
Chloride (mg/L)	BGWC-23	3.85	-	ND (598 J)	639
Chloride (mg/L)	BGWC-24	3.85	-	ND (1880 J)	2050
Chloride (mg/L)	BGWC-25	3.85	-	3.4	3.9
Chloride (mg/L)	BGWC-30	3.85	-	ND (390 J)	400
Fluoride (mg/L)	BGWC-7	0.162	-	ND (0.25 J)	ND (0.047 J)
Fluoride (mg/L)	BGWC-8	0.162	-	ND (0.061 J)	ND
Fluoride (mg/L)	BGWC-9	0.162	-	ND (0.13 J)	ND (0.13 J)
Fluoride (mg/L)	BGWC-10	0.162	-	ND (0.046 J)	ND
Fluoride (mg/L)	BGWC-12	0.162	-	ND	ND
Fluoride (mg/L)	BGWC-14	0.162	-	0.41	ND
Fluoride (mg/L)	BGWC-16	0.162	-	ND (0.061 J)	ND
Fluoride (mg/L)	BGWC-17	0.162	-	ND (0.11 J)	ND
Fluoride (mg/L)	BGWC-18	0.162	-	ND (0.095 J)	ND (0.054 J)
Fluoride (mg/L)	BGWC-19	0.162	-	ND (0.07 J)	ND (0.17 J)
Fluoride (mg/L)	BGWC-20	0.162	-	ND (0.038 J)	ND
Fluoride (mg/L)	BGWC-21	0.162	-	ND	ND
Fluoride (mg/L)	BGWC-22	0.162	-	ND (0.15 J)	0.78
Fluoride (mg/L)	BGWC-23	0.162	-	0.71	0.81
Fluoride (mg/L)	BGWC-24	0.162	-	3.1	3.1
Fluoride (mg/L)	BGWC-25	0.162	-	ND	ND
Fluoride (mg/L)	BGWC-30	0.162	-	0.51	0.44
pH (s.u.)	BGWC-7	8.3	7.4	7.0	6.8
pH (s.u.)	BGWC-8	8.3	7.4	7.7	7.7
pH (s.u.)	BGWC-9	8.3	7.4	7.5	7.3
pH (s.u.)	BGWC-10	8.3	7.4	7.5	7.2
pH (s.u.)	BGWC-12	8.3	7.4	7.4	7.4
pH (s.u.)	BGWC-14	8.3	7.4	7.3	6.9
pH (s.u.)	BGWC-16	8.3	7.4	7.0	6.7
pH (s.u.)	BGWC-17	8.3	7.4	7.2	7.4
pH (s.u.)	BGWC-18	8.3	7.4	6.6	6.7
pH (s.u.)	BGWC-19	8.3	7.4	6.5	6.4
pH (s.u.)	BGWC-20	8.3	7.4	7.2	6.9
pH (s.u.)	BGWC-21	8.3	7.4	7.7	7.6
pH (s.u.)	BGWC-22	8.3	7.4	6.9	6.8
pH (s.u.)	BGWC-23	8.3	7.4	7.2	7.1
pH (s.u.)	BGWC-24	8.3	7.4	6.6	6.6
pH (s.u.)	BGWC-25	8.3	7.4	7.4	7.3
pH (s.u.)	BGWC-30	8.3	7.4	7.4	7.4
Sulfate (mg/L)	BGWC-7	8.76	-	419	438
Sulfate (mg/L)	BGWC-8	8.76	-	35.2	53
Sulfate (mg/L)	BGWC-9	8.76	-	80.6	117
Sulfate (mg/L)	BGWC-10	8.76	-	110	122

Table B-1
Detection Monitoring Prediction Limit Comparison
Plant Bowen, Bartow County, Georgia

Parameter	Well ID	Upper PL	Lower PL	Jun 12-15, 2018	Oct 16-22, 2018
Sulfate (mg/L)	BGWC-12	8.76	-	ND (275 J)	336
Sulfate (mg/L)	BGWC-14	8.76	-	ND (248 J)	286
Sulfate (mg/L)	BGWC-16	8.76	-	246	276
Sulfate (mg/L)	BGWC-17	8.76	-	106	118
Sulfate (mg/L)	BGWC-18	8.76	-	74.6	89.3
Sulfate (mg/L)	BGWC-19	8.76	-	ND (78.3 J)	114
Sulfate (mg/L)	BGWC-20	8.76	-	ND (541 J)	604
Sulfate (mg/L)	BGWC-21	8.76	-	48.1	57.2
Sulfate (mg/L)	BGWC-22	8.76	-	738	846
Sulfate (mg/L)	BGWC-23	8.76	-	ND (586 J)	590
Sulfate (mg/L)	BGWC-24	8.76	-	ND (689 J)	723
Sulfate (mg/L)	BGWC-25	8.76	-	10	8.1
Sulfate (mg/L)	BGWC-30	8.76	-	ND (174 J)	204
TDS (mg/L)	BGWC-7	320	-	873	876
TDS (mg/L)	BGWC-8	320	-	217	247
TDS (mg/L)	BGWC-9	320	-	348	377
TDS (mg/L)	BGWC-10	320	-	362	355
TDS (mg/L)	BGWC-12	320	-	684	739
TDS (mg/L)	BGWC-14	320	-	633	642
TDS (mg/L)	BGWC-16	320	-	593	578
TDS (mg/L)	BGWC-17	320	-	395	446
TDS (mg/L)	BGWC-18	320	-	290	325
TDS (mg/L)	BGWC-19	320	-	280	321
TDS (mg/L)	BGWC-20	320	-	1060	1150
TDS (mg/L)	BGWC-21	320	-	231	236
TDS (mg/L)	BGWC-22	320	-	2380	2490
TDS (mg/L)	BGWC-23	320	-	2020	1880
TDS (mg/L)	BGWC-24	320	-	4180	4300
TDS (mg/L)	BGWC-25	320	-	225	218
TDS (mg/L)	BGWC-30	320	-	1190	1070

Notes:
- = Not applicable
J = Indicates that analyte was estimated and detected between the laboratory Method Detection Limit (MDL) and Reporting Limit (RL).
mg/L = milligrams per liter
ND = Indicates the parameter was not detected above the laboratory MDL.
PL = Prediction Limit
s.u. = standard unit
TDS = Total Dissolved Solids
(1) Shaded values indicate an exceedance of the statistically derived PL.
(2) The pH value presented was recorded at the time of sample collection in the field. This is the only parameter in which the field result is compared to both the upper and lower PL.
(3) Due to the uncertainity associated with estimated values, J qualified results are not considered when evaluating PL exceedances.

Assessment Monitoring Program
Statistical Analysis Package
Plant Bowen Ash Pond 1 (AP-1)

June 2018 event (AM 01)

EPD Based Groundwater Protection Standards Statistical Analysis Package

AM 01

Table B-2
EPD Based Groundwater Protection Standards
Plant Bowen - Ash Pond 1
Bartow County, Georgia
AM 01

Constituent	CAS	Units	EPA MCL	Statistically Derived Upper Tolerance Limits for Background	GWPS[1]
Antimony	7440-36-0	mg/L	0.006	0.003	0.006
Arsenic	7440-38-2	mg/L	0.01	0.005	0.01
Barium	7440-39-3	mg/L	2	0.218	2
Beryllium	7440-41-7	mg/L	0.004	0.003	0.004
Cadmium	7440-43-9	mg/L	0.005	0.001	0.005
Chromium (III+VI)	7440-47-3	mg/L	0.1	0.01	0.1
Cobalt[2]	7440-48-4	mg/L	N/A	0.01	0.01
Fluoride	16984-48-8	mg/L	4	0.1973	4
Lead[2]	7439-92-1	mg/L	N/A	0.005	0.005
Lithium[2]	7439-93-2	mg/L	N/A	0.05	0.05
Mercury	7439-97-6	mg/L	0.002	0.0005	0.002
Molybdenum[2]	7439-98-7	mg/L	N/A	0.01	0.01
Selenium	7782-49-2	mg/L	0.05	0.01	0.05
Thallium	7440-28-0	mg/L	0.002	0.001	0.002
Combined Radium	7440-14-4	pCi/L	5	1.862	5

Notes:

- = Not applicable

EPA MCL - U.S. Environmental Protection Agency, Maximum Contaminant Level

GWPS - Groundwater Protection Standards

mg/L - milligram per liter

N/A - Not Available

pCi/L - Picocuries per liter

[1]GWPS selected as the greater value between the EPA MCL and the background Upper Tolerance Limit.

[2]Constituent without established EPA MCL.

Tolerance Limit

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 9:47 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	20	40	n/a	0.3585	NP Inter(normal...
Barium (mg/L)	n/a	0.218	n/a	n/a	n/a	20	0	n/a	0.3585	NP Inter(normal...
Beryllium (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	20	95	n/a	0.3585	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	66.67	n/a	0.3972	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.01	n/a	n/a	n/a	20	95	n/a	0.3585	NP Inter(NDs)
Fluoride (mg/L)	n/a	0.1973	n/a	n/a	n/a	22	18.18	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.005	n/a	n/a	n/a	18	88.89	n/a	0.3972	NP Inter(NDs)
Lithium (mg/L)	n/a	0.05	n/a	n/a	n/a	20	100	n/a	0.3585	NP Inter(NDs)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	20	65	n/a	0.3585	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	20	80	n/a	0.3585	NP Inter(NDs)
Total Radium (pCi/L)	n/a	1.862	n/a	n/a	n/a	20	15	No	0.05	Inter

Summary of Confidence Intervals - Significant Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 9:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**BGWC-22**	**0.01472**	**0.01006**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-22**	**0.07267**	**0.06207**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-20**	**0.01487**	**0.01193**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-23**	**0.01335**	**0.01225**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-30**	**0.02046**	**0.0139**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 9:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	BGWC-9	0.003184	0.002016	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.000974	0.0004693	0.01	No	10	40	No	0.01	Param.
Arsenic (mg/L)	BGWC-16	0.0025	0.0007	0.01	No	10	50	No	0.011	NP (normality)
Arsenic (mg/L)	BGWC-12	0.001167	0.0006081	0.01	No	10	40	No	0.01	Param.
Arsenic (mg/L)	BGWC-10	0.008472	0.005428	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-17	0.0025	0.0006	0.01	No	10	70	No	0.011	NP (NDs)
Arsenic (mg/L)	BGWC-22	0.003213	0.001927	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	BGWC-18	0.0025	0.0005	0.01	No	10	70	No	0.011	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.001039	0.0005272	0.01	No	10	30	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-7	0.002958	0.002092	0.01	No	10	20	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.003042	0.002118	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	BGWC-21	0.001622	0.0009535	0.01	No	10	40	No	0.01	Param.
Arsenic (mg/L)	BGWC-20	0.00182	0.001265	0.01	No	10	30	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008658	0.003482	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.003285	0.001715	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-14	0.003939	0.001546	0.01	No	11	27.27	No	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.002896	0.001077	0.01	No	10	20	No	0.01	Param.
Barium (mg/L)	BGWC-9	0.03354	0.02678	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03241	0.02282	2	No	10	0	x^2	0.01	Param.
Barium (mg/L)	BGWC-16	0.03239	0.02715	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-12	0.03323	0.02723	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.07232	0.05168	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-17	0.01965	0.01571	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09548	0.08786	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03859	0.02999	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.0415	0.0329	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.0428	0.038	2	No	10	0	No	0.011	NP (normality)
Barium (mg/L)	BGWC-25	0.03297	0.02235	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.05025	0.04389	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03518	0.02902	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-24	0.1328	0.0739	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-23	0.0956	0.08108	2	No	10	0	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-14	0.08451	0.07183	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.2152	0.131	2	No	10	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-9	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-8	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.001307	0.001092	0.005	No	10	0	sqrt(x)	0.01	Param.
Cadmium (mg/L)	BGWC-12	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-10	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-17	0.0001487	0.00009248	0.005	No	10	20	x^(1/3)	0.01	Param.
Cadmium (mg/L)	BGWC-22	0.0005	0.0002	0.005	No	10	90	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-18	0.0006105	0.000167	0.005	No	10	20	No	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0005	0.0001	0.005	No	10	80	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-7	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-25	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-21	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0005	0.00008	0.005	No	10	90	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.004647	0.001077	0.005	No	10	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-23	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-14	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 9:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-30	0.0004804	0.0002396	0.005	No	10	10	No	0.01	Param.
Cobalt (mg/L)	BGWC-9	0.005	0.0003	0.01	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-8	0.005	0.00013	0.01	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.005209	0.004171	0.01	No	10	10	No	0.01	Param.
Cobalt (mg/L)	BGWC-12	0.005	0.0003	0.01	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-17	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	**BGWC-22**	**0.01472**	**0.01006**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	BGWC-18	0.005	0.0005	0.01	No	10	60	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-7	0.005	0.0005	0.01	No	10	30	No	0.011	NP (normality)
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.01	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.0004	0.01	No	10	70	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.01	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.003874	0.002086	0.01	No	10	10	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.0015	0.01	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-14	0.005	0.0003	0.01	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0006	0.01	No	10	20	No	0.011	NP (normality)
Fluoride (mg/L)	BGWC-9	0.3898	0.1193	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.06437	0.02093	4	No	11	27.27	No	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.3026	0.06885	4	No	11	18.18	No	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1708	0.02203	4	No	11	27.27	No	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.2113	0.05344	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.379	0.131	4	No	11	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-22	0.4261	0.2466	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.2816	0.07566	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-19	0.1743	0.05309	4	No	11	18.18	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2126	0.1183	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-25	0.1225	0.05088	4	No	11	18.18	No	0.01	Param.
Fluoride (mg/L)	BGWC-21	0.08424	0.02992	4	No	11	27.27	No	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.2197	0.01473	4	No	11	18.18	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	1.941	0.06762	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.1433	0.03067	4	No	11	18.18	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14	0.319	0.1101	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.4465	0.07714	4	No	11	0	No	0.01	Param.
Lithium (mg/L)	BGWC-9	0.025	0.0012	0.05	No	10	60	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-8	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-16	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-12	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-10	0.025	0.0011	0.05	No	10	50	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-17	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-22	0.021	0.0114	0.05	No	10	0	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-18	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-19	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-7	0.0102	0.0079	0.05	No	10	10	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-25	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-21	0.025	0.025	0.05	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02439	0.01709	0.05	No	10	0	No	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0068	0.0053	0.05	No	10	10	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-23	0.01261	0.008593	0.05	No	10	0	No	0.01	Param.

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 9:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lithium (mg/L)	BGWC-14	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-30	0.01982	0.01237	0.05	No	10	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003509	0.002631	0.01	No	10	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.004084	0.001181	0.01	No	10	20	No	0.01	Param.
Molybdenum (mg/L)	BGWC-16	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-12	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0049	0.0032	0.01	No	10	0	No	0.011	NP (normality)
Molybdenum (mg/L)	BGWC-17	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	**BGWC-22**	**0.07267**	**0.06207**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	BGWC-18	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-19	0.005	0.005	0.01	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-7	0.01258	0.008226	0.01	No	10	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.004457	0.001829	0.01	No	10	30	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.002448	0.001352	0.01	No	10	40	No	0.01	Param.
Molybdenum (mg/L)	**BGWC-20**	**0.01487**	**0.01193**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	BGWC-24	0.004745	0.001695	0.01	No	10	10	No	0.01	Param.
Molybdenum (mg/L)	**BGWC-23**	**0.01335**	**0.01225**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	BGWC-14	0.01101	0.006278	0.01	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	**BGWC-30**	**0.02046**	**0.0139**	**0.01**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	BGWC-9	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-8	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-16	0.0003	0.00019	0.002	No	10	0	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-12	0.0005	0.00008	0.002	No	10	70	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-10	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-17	0.0005	0.00008	0.002	No	10	50	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-22	0.0006692	0.0004848	0.002	No	10	0	No	0.01	Param.
Thallium (mg/L)	BGWC-18	0.0005	0.00006	0.002	No	10	90	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-19	0.0005	0.00006	0.002	No	10	50	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-7	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-25	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-21	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-20	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0004347	0.0002262	0.002	No	10	20	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.0005	0.0001	0.002	No	10	90	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-14	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-30	0.0007747	0.0006133	0.002	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-9	1.176	0.4126	5	No	10	20	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-8	0.6358	0.2153	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-16	1.329	0.4408	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-12	0.9835	0.1646	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-10	1.57	0.6218	5	No	10	10	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-17	0.7723	0.3332	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-22	2.439	1.635	5	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-18	0.8416	0.2878	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-19	1.379	0.3722	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-7	1.951	1.011	5	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-25	1.129	0.3689	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-21	0.9088	0.4282	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-20	1.771	1.014	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-24	3.272	2.15	5	No	10	0	No	0.01	Param.

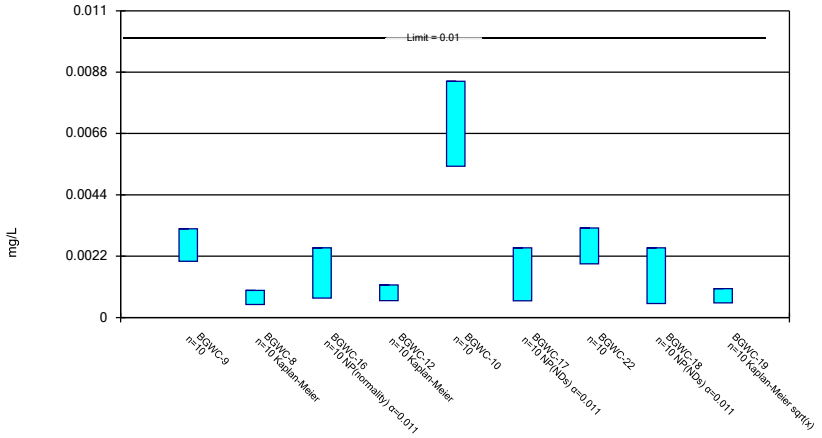
Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 9:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Total Radium (pCi/L)	BGWC-23	1.862	0.7671	5	No	10	10	No	0.01	Param.
Total Radium (pCi/L)	BGWC-14	6.817	4.545	5	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-30	3.196	1.235	5	No	9	11.11	No	0.01	Param.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

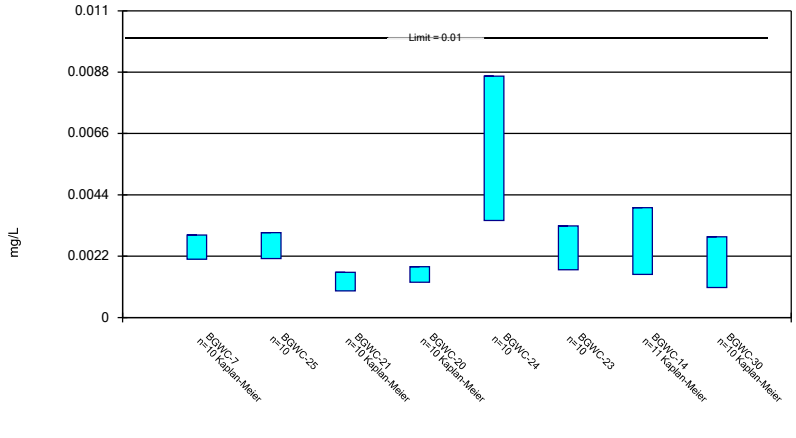


Constituent: Arsenic Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

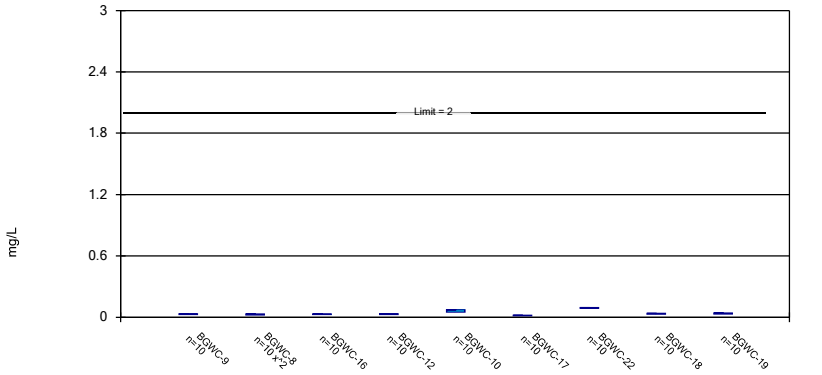


Constituent: Arsenic Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

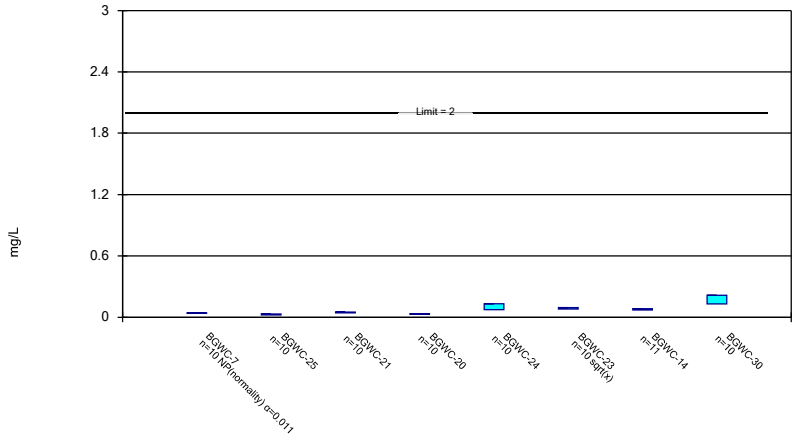


Constituent: Barium Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.0022								
6/7/2016		0.00018 (J)	<0.005	<0.005	0.0039	<0.005			
6/8/2016							0.0012 (J)	<0.005	0.00046 (J)
8/10/2016		<0.005							
8/11/2016	0.0028 (J)		<0.005			<0.005			
8/12/2016				0.0009 (J)				<0.005	0.0008 (J)
8/16/2016					0.0091				
8/18/2016							0.0022 (J)		
10/4/2016		<0.005							
10/5/2016	0.002 (J)								
10/6/2016				<0.005					
10/7/2016			<0.005		0.0074	<0.005		<0.005	<0.005
10/10/2016							0.002 (J)		
12/2/2016		<0.005							
12/5/2016	<0.005			<0.005					
12/6/2016			<0.005		0.0044 (J)	<0.005		<0.005	
12/7/2016									<0.005
12/8/2016							<0.005		
2/14/2017		<0.005							
2/15/2017	0.0033 (J)			<0.005					
2/16/2017			<0.005		0.0081	<0.005		<0.005	<0.005
2/17/2017							0.0023 (J)		
4/14/2017		0.0007 (J)							
4/17/2017	0.0028 (J)								
4/18/2017			0.0007 (J)	0.0009 (J)	0.0084				
4/19/2017						0.0012 (J)		0.0013 (J)	0.0015 (J)
4/20/2017							0.0028 (J)		
5/26/2017	0.0035 (J)	0.0008 (J)							
5/30/2017			0.0008 (J)			0.0006 (J)			
6/1/2017								0.0005 (J)	0.0008 (J)
6/2/2017				0.0015 (J)	0.008				
6/5/2017							0.0035 (J)		
7/10/2017		0.0011 (J)							
7/11/2017	0.0033 (J)								
7/12/2017					0.0063				
7/13/2017				0.0006 (J)					
7/14/2017			0.0008 (J)			<0.005		<0.005	0.0006 (J)
7/19/2017							0.0028 (J)		
3/26/2018		0.0009 (J)							
3/27/2018	0.0021 (J)		0.0014 (J)		0.0064	0.00076 (J)		0.00066 (J)	0.00082 (J)
3/28/2018				0.0015 (J)					
3/29/2018							0.0037 (J)		
6/12/2018	0.0015 (J)	0.00065 (J)	0.00073 (J)						
6/14/2018				0.00096 (J)	0.0075	<0.005	0.0027 (J)	<0.005	
6/15/2018									0.00074 (J)
Mean	0.0026	0.001433	0.001693	0.001636	0.00695	0.002006	0.00257	0.001996	0.001322
Std. Dev.	0.0006549	0.0009469	0.0008724	0.0007914	0.001706	0.0008088	0.0007212	0.0008357	0.000856
Upper Lim.	0.003184	0.000974	0.0025	0.001167	0.008472	0.0025	0.003213	0.0025	0.001039
Lower Lim.	0.002016	0.0004693	0.0007	0.0006081	0.005428	0.0006	0.001927	0.0005	0.0005272

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0024	0.0037	0.0015	0.0011 (J)				
6/9/2016					0.0016	0.0012 (J)		
6/10/2016							0.0049	
8/11/2016	0.0024 (J)							
8/12/2016				0.0017 (J)				
8/15/2016		0.003 (J)						
8/17/2016							0.0042 (J)	
8/18/2016			<0.005		0.0054	0.003 (J)		
10/6/2016	<0.005							
10/7/2016							<0.005	
10/10/2016		0.0026 (J)	<0.005	<0.005	0.0079	0.0021 (J)		
12/6/2016	<0.005							
12/7/2016				<0.005	0.0121	0.0023 (J)		
12/8/2016		<0.005	<0.005				<0.005	
1/23/2017								<0.005
2/7/2017								<0.005
2/15/2017	0.003 (J)							
2/17/2017			<0.005	<0.005				
2/20/2017		0.0029 (J)			0.0063	0.0025 (J)		
2/21/2017							<0.005	
3/27/2017								0.0019 (J)
4/17/2017								0.0017 (J)
4/18/2017	0.0029 (J)							
4/19/2017			0.002 (J)	0.002 (J)	0.0051	0.0032 (J)		
4/20/2017		0.0024 (J)						
4/21/2017							0.0039 (J)	
5/22/2017								0.0034 (J)
6/1/2017		0.0025 (J)	0.0011 (J)	0.0017 (J)				
6/2/2017	0.0031 (J)							
6/5/2017					0.0072	0.0043 (J)		0.0039 (J)
6/6/2017							0.001 (J)	
6/15/2017							0.0024 (J)	
7/11/2017								0.0016 (J)
7/14/2017	0.0017 (J)							
7/17/2017		0.0021 (J)			0.0031 (J)	0.0017 (J)		
7/18/2017			0.0015 (J)	0.0018 (J)				
7/19/2017							0.0031 (J)	
8/23/2017								0.001 (J)
3/26/2018								0.0015 (J)
3/27/2018	0.0028 (J)							
3/28/2018		0.0019 (J)	0.0012 (J)	0.0018 (J)				
3/29/2018					0.0075 (J)	0.0028 (J)	0.0017 (J)	
6/13/2018	0.0023 (J)			0.0015 (J)	0.0045 (J)	0.0019 (J)		
6/14/2018		0.0022 (J)	0.00087 (J)					
6/15/2018							0.00074 (J)	0.00089 (J)
Mean	0.00256	0.00258	0.001817	0.00191	0.00607	0.0025	0.002676	0.002089
Std. Dev.	0.0004115	0.0005181	0.0006576	0.0004701	0.002901	0.0008794	0.001289	0.000985
Upper Lim.	0.002958	0.003042	0.001622	0.00182	0.008658	0.003285	0.003939	0.002896
Lower Lim.	0.002092	0.002118	0.0009535	0.001265	0.003482	0.001715	0.001546	0.001077

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.034								
6/7/2016		0.0051	0.027	0.027	0.091	0.017			
6/8/2016							0.092	0.039	0.036
8/10/2016		0.0264							
8/11/2016	0.0305		0.0292			0.0152			
8/12/2016				0.026				0.031	0.0412
8/16/2016					0.0667				
8/18/2016							0.0953		
10/4/2016		0.0316							
10/5/2016	0.0289								
10/6/2016				0.0308					
10/7/2016			0.0295		0.0631	0.0225		0.0427	0.0427
10/10/2016							0.0954		
12/2/2016		0.026							
12/5/2016	0.0269			0.0258					
12/6/2016			0.0367		0.0659	0.0171		0.0398	
12/7/2016									0.0338
12/8/2016							0.0991		
2/14/2017		0.0299							
2/15/2017	0.0299			0.029					
2/16/2017			0.0315		0.0621	0.0187		0.0309	0.0407
2/17/2017							0.0927		
4/14/2017		0.0275							
4/17/2017	0.0318								
4/18/2017			0.0272	0.0294	0.0545				
4/19/2017						0.0183		0.0325	0.042
4/20/2017							0.086		
5/26/2017	0.0341	0.0328							
5/30/2017			0.0316			0.0179			
6/1/2017								0.0331	0.0341
6/2/2017				0.0354	0.0555				
6/5/2017							0.0875		
7/10/2017		0.0305							
7/11/2017	0.0355								
7/12/2017					0.0572				
7/13/2017				0.0329					
7/14/2017			0.029			0.0191		0.0349	0.0405
7/19/2017							0.0877		
3/26/2018		0.029							
3/27/2018	0.026		0.027		0.051	0.015		0.027	0.029
3/28/2018				0.034					
3/29/2018							0.088		
6/12/2018	0.024	0.031	0.029						
6/14/2018				0.032	0.053	0.016	0.093	0.032	
6/15/2018									0.032
Mean	0.03016	0.02698	0.02977	0.03023	0.062	0.01768	0.09167	0.03429	0.0372
Std. Dev.	0.003788	0.008005	0.002942	0.003361	0.01156	0.002203	0.004269	0.004819	0.004823
Upper Lim.	0.03354	0.03241	0.03239	0.03323	0.07232	0.01965	0.09548	0.03859	0.0415
Lower Lim.	0.02678	0.02282	0.02715	0.02723	0.05168	0.01571	0.08786	0.02999	0.0329

Confidence Interval

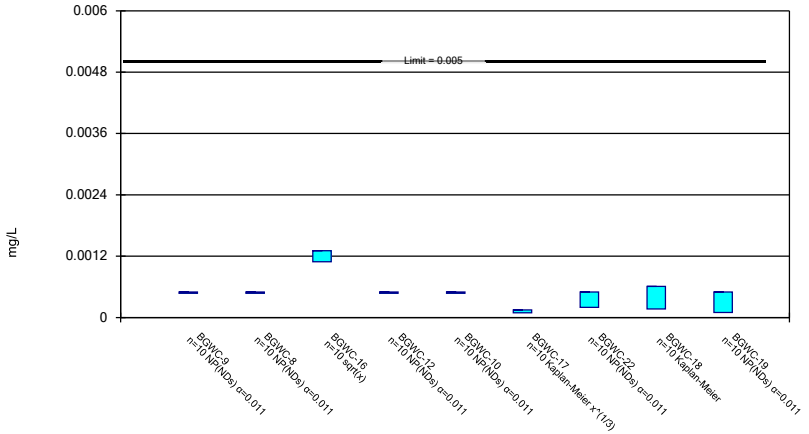
Constituent: Barium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.048	0.038	0.054	0.036				
6/9/2016					0.14	0.11		
6/10/2016							0.08	
8/11/2016	0.0428							
8/12/2016				0.0283				
8/15/2016		0.0321						
8/17/2016							0.0801	
8/18/2016			0.0479		0.113	0.0893		
10/6/2016	0.0404							
10/7/2016							0.0764	
10/10/2016		0.0283	0.0433	0.0288	0.0888	0.0839		
12/6/2016	0.0385							
12/7/2016				0.0279	0.0289	0.0912		
12/8/2016		0.0294	0.0474				0.0723	
1/23/2017								0.237
2/7/2017								0.191
2/15/2017	0.039							
2/17/2017			0.0483	0.0316				
2/20/2017		0.0275			0.0999	0.0813		
2/21/2017							0.0789	
3/27/2017								0.197
4/17/2017								0.192
4/18/2017	0.0392							
4/19/2017			0.0486	0.0367	0.114	0.087		
4/20/2017		0.0279						
4/21/2017							0.0871	
5/22/2017								0.197
6/1/2017		0.0313	0.0468	0.0361				
6/2/2017	0.0407							
6/5/2017					0.135	0.084		0.201
6/6/2017							0.0789	
6/15/2017							0.0822	
7/11/2017								0.179
7/14/2017	0.0394							
7/17/2017		0.0251			0.134	0.0809		
7/18/2017			0.0494	0.0346				
7/19/2017							0.091	
8/23/2017								0.15
3/26/2018								0.1
3/27/2018	0.039							
3/28/2018		0.018	0.043	0.03				
3/29/2018					0.08	0.085	0.067	
6/13/2018	0.038			0.031	0.1	0.091		
6/14/2018		0.019	0.042					
6/15/2018							0.066	0.087
Mean	0.0405	0.02766	0.04707	0.0321	0.1034	0.08836	0.07817	0.1731
Std. Dev.	0.002967	0.005947	0.003569	0.003455	0.03302	0.008444	0.007611	0.04715
Upper Lim.	0.0428	0.03297	0.05025	0.03518	0.1328	0.0956	0.08451	0.2152
Lower Lim.	0.038	0.02235	0.04389	0.02902	0.0739	0.08108	0.07183	0.131

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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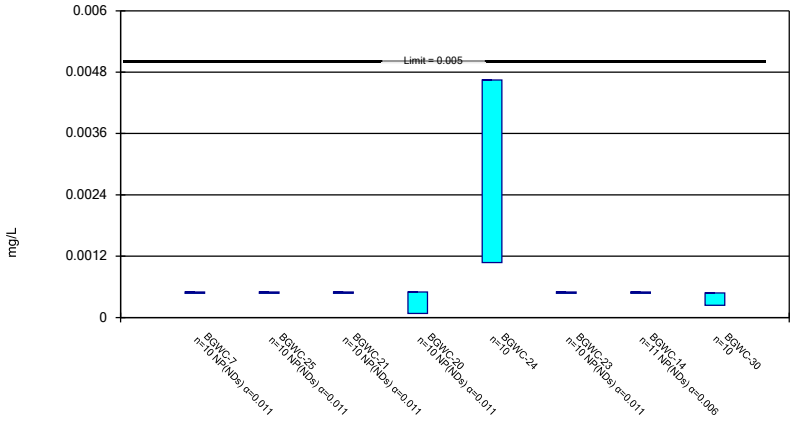
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



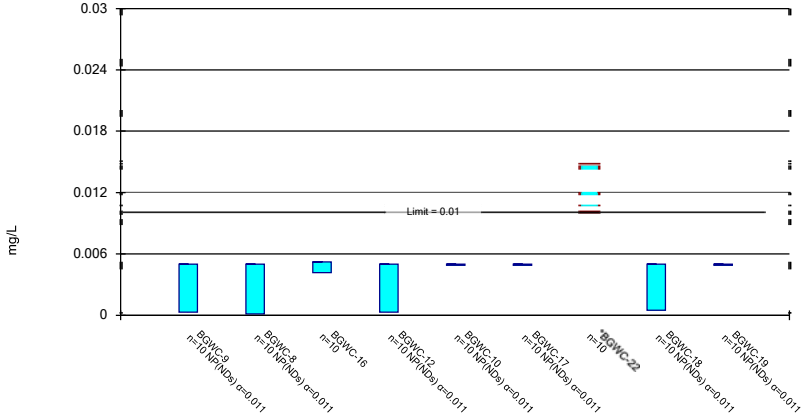
Constituent: Cadmium Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



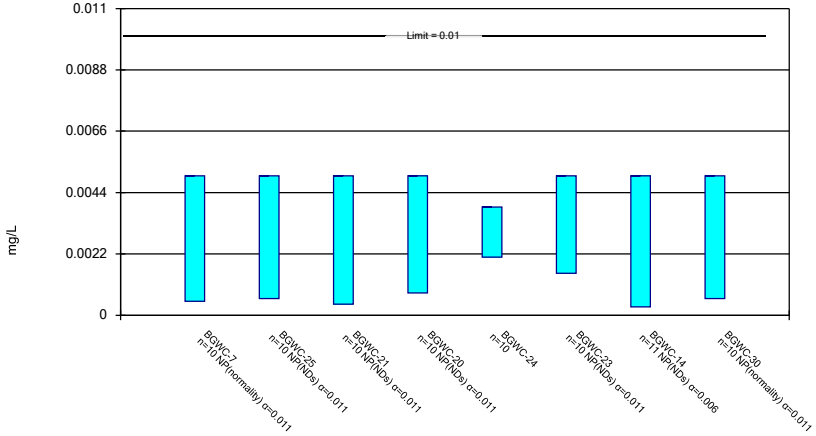
Constituent: Cobalt Analysis Run 10/15/2018 9:58 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cobalt Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.001								
6/7/2016		<0.001	0.0011 (J)	<0.001	<0.001	<0.001			
6/8/2016							<0.001	0.00063 (J)	<0.001
8/10/2016		<0.001							
8/11/2016	<0.001		0.0011			0.0001 (J)			
8/12/2016				<0.001				0.0004 (J)	<0.001
8/16/2016					<0.001				
8/18/2016							<0.001		
10/4/2016		<0.001							
10/5/2016	<0.001								
10/6/2016				<0.001					
10/7/2016			0.0012		<0.001	0.0002 (J)		0.0008 (J)	0.0001 (J)
10/10/2016							<0.001		
12/2/2016		<0.001							
12/5/2016	<0.001			<0.001					
12/6/2016			0.0012		<0.001	0.0001 (J)		0.0006 (J)	
12/7/2016									<0.001
12/8/2016							0.0002 (J)		
2/14/2017		<0.001							
2/15/2017	<0.001			<0.001					
2/16/2017			0.0015		<0.001	0.0001 (J)		0.0002 (J)	<0.001
2/17/2017							<0.001		
4/14/2017		<0.001							
4/17/2017	<0.001								
4/18/2017			0.0012	<0.001	<0.001				
4/19/2017						0.0001 (J)		9E-05 (J)	<0.001
4/20/2017							<0.001		
5/26/2017	<0.001	<0.001							
5/30/2017			0.0011			0.0002 (J)			
6/1/2017								0.0003 (J)	0.0001 (J)
6/2/2017				<0.001	<0.001				
6/5/2017							<0.001		
7/10/2017		<0.001							
7/11/2017	<0.001								
7/12/2017					<0.001				
7/13/2017				<0.001					
7/14/2017			0.0012			0.0002 (J)		0.0002 (J)	<0.001
7/19/2017							<0.001		
3/26/2018		<0.001							
3/27/2018	<0.001		0.0013		<0.001	<0.001		<0.001	<0.001
3/28/2018				<0.001					
3/29/2018							<0.001		
6/12/2018	<0.001	<0.001	0.0011						
6/14/2018				<0.001	<0.001	0.00015 (J)	<0.001	<0.001	
6/15/2018									<0.001
Mean	0.0005	0.0005	0.0012	0.0005	0.0005	0.000215	0.00047	0.000422	0.00042
Std. Dev.	0	0	0.0001247	0	0	0.0001564	9.487E-05	0.0002246	0.0001687
Upper Lim.	0.0005	0.0005	0.001307	0.0005	0.0005	0.0001487	0.0005	0.0006105	0.0005
Lower Lim.	0.0005	0.0005	0.001092	0.0005	0.0005	9.248E-05	0.0002	0.000167	0.0001

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	<0.001	<0.001	<0.001	<0.001				
6/9/2016					0.00052 (J)	<0.001		
6/10/2016							<0.001	
8/11/2016	<0.001							
8/12/2016				<0.001				
8/15/2016		<0.001						
8/17/2016							<0.001	
8/18/2016			<0.001		0.0009 (J)	<0.001		
10/6/2016	<0.001							
10/7/2016							<0.001	
10/10/2016		<0.001	<0.001	<0.001	0.0017	<0.001		
12/6/2016	<0.001							
12/7/2016				<0.001	0.0004 (J)	<0.001		
12/8/2016		<0.001	<0.001				<0.001	
1/23/2017								0.0003 (J)
2/7/2017								0.0006 (J)
2/15/2017	<0.001							
2/17/2017			<0.001	8E-05 (J)				
2/20/2017		<0.001			0.0028	<0.001		
2/21/2017							<0.001	
3/27/2017								0.0003 (J)
4/17/2017								0.0002 (J)
4/18/2017	<0.001							
4/19/2017			<0.001	<0.001	0.0035	<0.001		
4/20/2017		<0.001						
4/21/2017							<0.001	
5/22/2017								0.0003 (J)
6/1/2017		<0.001	<0.001	<0.001				
6/2/2017	<0.001							
6/5/2017					0.0035	<0.001		0.0003 (J)
6/6/2017							<0.001	
6/15/2017							<0.001	
7/11/2017								0.0005 (J)
7/14/2017	<0.001							
7/17/2017		<0.001			0.0037	<0.001		
7/18/2017			<0.001	<0.001				
7/19/2017							<0.001	
8/23/2017								0.0004 (J)
3/26/2018								<0.001
3/27/2018	<0.001							
3/28/2018		<0.001	<0.001	<0.001				
3/29/2018					0.0063	<0.001	<0.001	
6/13/2018	<0.001			<0.001	0.0053	<0.001		
6/14/2018		<0.001	<0.001					
6/15/2018							<0.001	0.0002 (J)
Mean	0.0005	0.0005	0.0005	0.000458	0.002862	0.0005	0.0005	0.00036
Std. Dev.	0	0	0	0.0001328	0.002001	0	0	0.000135
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.004647	0.0005	0.0005	0.0004804
Lower Lim.	0.0005	0.0005	0.0005	8E-05	0.001077	0.0005	0.0005	0.0002396

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.01								
6/7/2016		0.00013 (J)	0.0037	<0.01	<0.01	<0.01			
6/8/2016							0.0079	0.00071 (J)	<0.01
8/10/2016		0.0003 (J)							
8/11/2016	0.0003 (J)		0.0039 (J)			<0.01			
8/12/2016				<0.01				0.0006 (J)	<0.01
8/16/2016					<0.01				
8/18/2016							0.0109		
10/4/2016		<0.01							
10/5/2016	<0.01								
10/6/2016				<0.01					
10/7/2016			0.0043 (J)		<0.01	<0.01		0.0005 (J)	<0.01
10/10/2016							0.011		
12/2/2016		<0.01							
12/5/2016	0.0006 (J)			0.0006 (J)					
12/6/2016			0.005 (J)		<0.01	<0.01		0.0009 (J)	
12/7/2016									<0.01
12/8/2016							0.013		
2/14/2017		<0.01							
2/15/2017	<0.01			<0.01					
2/16/2017			0.0054 (J)		<0.01	<0.01		<0.01	<0.01
2/17/2017							0.0122		
4/14/2017		<0.01							
4/17/2017	<0.01								
4/18/2017			0.0054 (J)	<0.01	<0.01				
4/19/2017						<0.01		<0.01	<0.01
4/20/2017							0.0116		
5/26/2017	<0.01	<0.01							
5/30/2017			0.0045 (J)			<0.01			
6/1/2017								<0.01	<0.01
6/2/2017				<0.01	<0.01				
6/5/2017							0.0112		
7/10/2017		<0.01							
7/11/2017	<0.01								
7/12/2017					<0.01				
7/13/2017				0.0003 (J)					
7/14/2017			0.0049 (J)			<0.01		<0.01	<0.01
7/19/2017							0.0131		
3/26/2018		<0.01							
3/27/2018	<0.01		<0.01		<0.01	<0.01		<0.01	<0.01
3/28/2018				<0.01					
3/29/2018							0.016		
6/12/2018	<0.01	<0.01	0.0048 (J)						
6/14/2018				<0.01	<0.01	<0.01	0.017	<0.01	
6/15/2018									<0.01
Mean	0.00409	0.004043	0.00469	0.00409	0.005	0.005	0.01239	0.003271	0.005
Std. Dev.	0.00192	0.002018	0.000582	0.00192	0	0	0.002615	0.002234	0
Upper Lim.	0.005	0.005	0.005209	0.005	0.005	0.005	0.01472	0.005	0.005
Lower Lim.	0.0003	0.00013	0.004171	0.0003	0.005	0.005	0.01006	0.0005	0.005

Confidence Interval

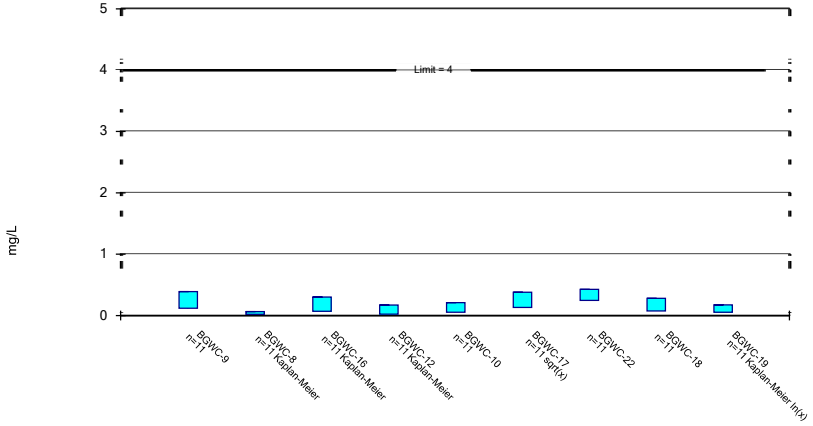
Constituent: Cobalt (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.00081 (J)	<0.01	0.00041 (J)	<0.01				
6/9/2016					0.0026	<0.01		
6/10/2016							<0.01	
8/11/2016	0.0007 (J)							
8/12/2016				<0.01				
8/15/2016		<0.01						
8/17/2016							<0.01	
8/18/2016			<0.01		0.0021 (J)	<0.01		
10/6/2016	<0.01							
10/7/2016							<0.01	
10/10/2016		<0.01	<0.01	<0.01	0.0018 (J)	<0.01		
12/6/2016	0.0009 (J)							
12/7/2016				0.0008 (J)	0.0018 (J)	0.0015 (J)		
12/8/2016		0.0006 (J)	0.0006 (J)				<0.01	
1/23/2017								0.0012 (J)
2/7/2017								0.0008 (J)
2/15/2017	<0.01							
2/17/2017			<0.01	<0.01				
2/20/2017		<0.01			0.0027 (J)	<0.01		
2/21/2017							<0.01	
3/27/2017								0.001 (J)
4/17/2017								0.0009 (J)
4/18/2017	0.0005 (J)							
4/19/2017			<0.01	<0.01	0.0032 (J)	<0.01		
4/20/2017		<0.01						
4/21/2017							<0.01	
5/22/2017								0.0008 (J)
6/1/2017		<0.01	<0.01	<0.01				
6/2/2017	0.0006 (J)							
6/5/2017					0.0034 (J)	<0.01		0.0008 (J)
6/6/2017							<0.01	
6/15/2017							0.0003 (J)	
7/11/2017								0.0008 (J)
7/14/2017	0.0006 (J)							
7/17/2017		<0.01			0.0033 (J)	<0.01		
7/18/2017			0.0004 (J)	<0.01				
7/19/2017							0.0003 (J)	
8/23/2017								0.0006 (J)
3/26/2018								<0.01
3/27/2018	<0.01							
3/28/2018		<0.01	<0.01	<0.01				
3/29/2018					<0.01	<0.01	<0.01	
6/13/2018	0.00068 (J)			<0.01	0.0039 (J)	<0.01		
6/14/2018		<0.01	<0.01					
6/15/2018							<0.01	<0.01
Mean	0.001979	0.00456	0.003641	0.00458	0.00298	0.00465	0.004145	0.00169
Std. Dev.	0.002088	0.001391	0.002189	0.001328	0.001002	0.001107	0.001901	0.001751
Upper Lim.	0.005	0.005	0.005	0.005	0.003874	0.005	0.005	0.005
Lower Lim.	0.0005	0.0006	0.0004	0.0008	0.002086	0.0015	0.0003	0.0006

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Fluoride Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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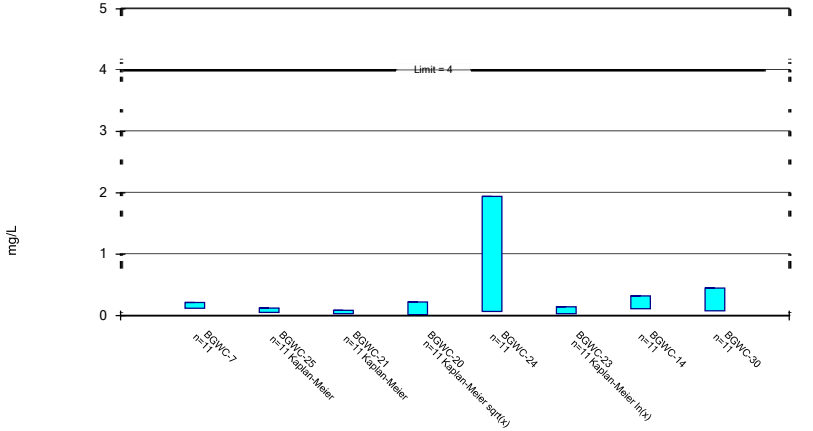
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Fluoride Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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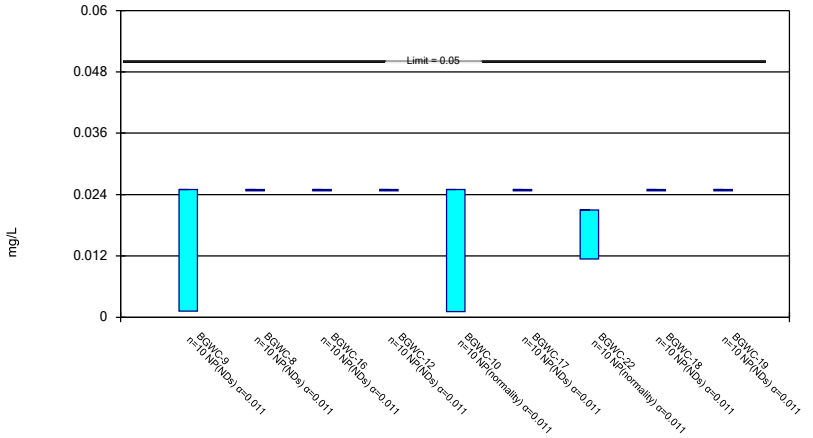
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Lithium Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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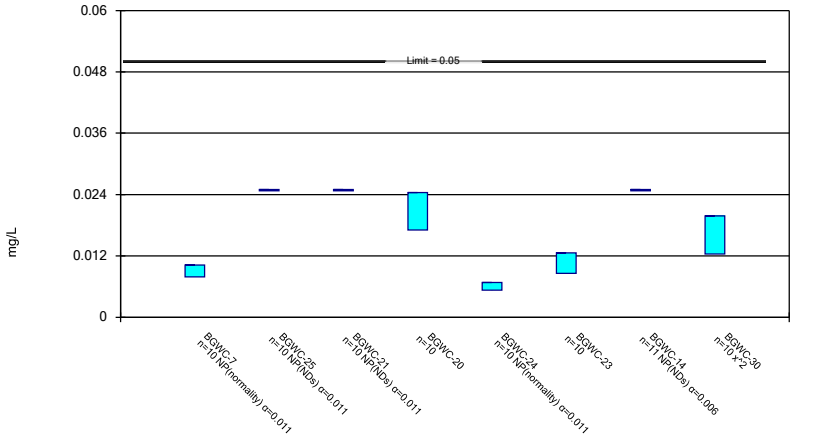
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Lithium Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.12 (J)								
6/7/2016		<0.3	<0.3	<0.3	0.09 (J)	0.15 (J)			
6/8/2016							0.43	0.1 (J)	<0.3
8/10/2016		0.07 (J)							
8/11/2016	0.27 (J)		0.12 (J)			0.3 (J)			
8/12/2016				0.08 (J)				0.39	0.2 (J)
8/16/2016					0.09 (J)				
8/18/2016							0.3 (J)		
10/4/2016		0.07 (J)							
10/5/2016	0.12 (J)								
10/6/2016				0.06 (J)					
10/7/2016			0.08 (J)		0.17 (J)	0.14 (J)		0.16 (J)	0.07 (J)
10/10/2016							0.32		
12/2/2016		0.09 (J)							
12/5/2016	0.26 (J)			0.12 (J)					
12/6/2016			0.24 (J)		0.16 (J)	0.19 (J)		0.32	
12/7/2016									0.09 (J)
12/8/2016							0.26 (J)		
2/14/2017		0.02 (J)							
2/15/2017	0.46			0.33					
2/16/2017			0.31		0.38	0.51		0.38	0.6
2/17/2017							0.39		
4/14/2017		0.02 (J)							
4/17/2017	0.14 (J)								
4/18/2017			0.02 (J)	0.006 (J)	0.12 (J)				
4/19/2017						0.18 (J)		0.08 (J)	0.09 (J)
4/20/2017							0.34		
5/26/2017	0.13 (J)	0.02 (J)							
5/30/2017			0.51			0.15 (J)			
6/1/2017								0.09 (J)	0.05 (J)
6/2/2017				0.04 (J)	0.03 (J)				
6/5/2017							0.29 (J)		
7/10/2017		0.03 (J)							
7/11/2017	0.2 (J)								
7/12/2017					0.15 (J)				
7/13/2017				0.17 (J)					
7/14/2017			0.14 (J)			0.16 (J)		0.06 (J)	0.08 (J)
7/19/2017							0.33		
10/10/2017	0.61	<0.3		0.08 (J)					
10/11/2017			0.29 (J)		0.07 (J)	0.64		0.14 (J)	0.11 (J)
10/12/2017							0.31		
3/26/2018		<0.3							
3/27/2018	0.36		<0.3		<0.3	0.33		<0.3	<0.3
3/28/2018				<0.3					
3/29/2018							0.58		
6/12/2018	0.13 (J)	0.061 (J)	0.061 (J)						
6/14/2018				<0.3	0.046 (J)	0.11 (J)	0.15 (J)	0.095 (J)	
6/15/2018									0.07 (J)
Mean	0.2545	0.07555	0.1883	0.1215	0.1324	0.26	0.3364	0.1786	0.1509
Std. Dev.	0.1623	0.05333	0.1405	0.08688	0.09471	0.172	0.1077	0.1236	0.1554
Upper Lim.	0.3898	0.06437	0.3026	0.1708	0.2113	0.379	0.4261	0.2816	0.1743
Lower Lim.	0.1193	0.02093	0.06885	0.02203	0.05344	0.131	0.2466	0.07566	0.05309

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.19 (J)	0.14 (J)	<0.3	0.09 (J)				
6/9/2016					<0.3	0.12 (J)		
6/10/2016							0.23	
8/11/2016	0.15 (J)							
8/12/2016				0.04 (J)				
8/15/2016		0.08 (J)						
8/17/2016							0.12 (J)	
8/18/2016			0.09 (J)		0.24 (J)	0.08 (J)		
10/6/2016	0.17 (J)							
10/7/2016							0.13 (J)	
10/10/2016		0.1 (J)	0.04 (J)	0.06 (J)	0.3	0.09 (J)		
12/6/2016	0.22 (J)							
12/7/2016				0.07 (J)	0.05 (J)	0.08 (J)		
12/8/2016		0.06 (J)	0.08 (J)				0.31	
1/23/2017								0.06 (J)
2/7/2017								0.09 (J)
2/15/2017	0.18 (J)							
2/17/2017			0.08 (J)	0.06 (J)				
2/20/2017		0.16 (J)			0.65	0.09 (J)		
2/21/2017							0.35	
3/27/2017								0.09 (J)
4/17/2017								0.36
4/18/2017	0.11 (J)							
4/19/2017			0.04 (J)	0.005 (J)	0.21 (J)	0.03 (J)		
4/20/2017		0.02 (J)						
4/21/2017							0.04 (J)	
5/22/2017								0.05 (J)
6/1/2017		0.04 (J)	0.03 (J)	0.65				
6/2/2017	0.07 (J)							
6/5/2017					0.05 (J)	<0.3		0.32
6/6/2017							0.36	
7/11/2017								0.13 (J)
7/14/2017	0.23 (J)							
7/17/2017		0.07 (J)			2.5	0.09 (J)		
7/18/2017			0.08 (J)	0.36				
7/19/2017							0.18 (J)	
8/23/2017								0.17 (J)
10/10/2017								0.35
10/11/2017	0.1 (J)	0.11 (J)		<0.3	1.8	0.09 (J)		
10/12/2017			0.12 (J)				0.08 (J)	
3/26/2018								0.75
3/27/2018	<0.3							
3/28/2018		<0.3	<0.3	<0.3				
3/29/2018					2	<0.3	<0.3	
6/13/2018	0.25 (J)			0.038 (J)	3.1	0.71		
6/14/2018		<0.3	<0.3					
6/15/2018							0.41	0.51
Mean	0.1655	0.09818	0.09182	0.1521	1.005	0.1527	0.2145	0.2618
Std. Dev.	0.05663	0.04813	0.04535	0.1913	1.124	0.1879	0.1253	0.2216
Upper Lim.	0.2126	0.1225	0.08424	0.2197	1.941	0.1433	0.319	0.4465
Lower Lim.	0.1183	0.05088	0.02992	0.01473	0.06762	0.03067	0.1101	0.07714

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.05								
6/7/2016		<0.05	<0.05	<0.05	0.0065	<0.05			
6/8/2016							0.012	<0.05	<0.05
8/10/2016		<0.05							
8/11/2016	<0.05		<0.05			<0.05			
8/12/2016				<0.05				<0.05	<0.05
8/16/2016					<0.05				
8/18/2016							0.0118 (J)		
10/4/2016		<0.05							
10/5/2016	<0.05								
10/6/2016				<0.05					
10/7/2016			<0.05		<0.05	<0.05		<0.05	<0.05
10/10/2016							0.0137 (J)		
12/2/2016		<0.05							
12/5/2016	<0.05			<0.05					
12/6/2016			<0.05		<0.05	<0.05		<0.05	
12/7/2016									<0.05
12/8/2016							0.0154 (J)		
2/14/2017		<0.05							
2/15/2017	<0.05			<0.05					
2/16/2017			<0.05		<0.05	<0.05		<0.05	<0.05
2/17/2017							0.0125 (J)		
4/14/2017		<0.05							
4/17/2017	0.0013 (J)								
4/18/2017			<0.05	<0.05	0.0011 (J)				
4/19/2017						<0.05		<0.05	<0.05
4/20/2017							0.012 (J)		
5/26/2017	0.0013 (J)	<0.05							
5/30/2017			<0.05			<0.05			
6/1/2017								<0.05	<0.05
6/2/2017				<0.05	0.0011 (J)				
6/5/2017							0.0114 (J)		
7/10/2017		<0.05							
7/11/2017	<0.05								
7/12/2017					<0.05				
7/13/2017				<0.05					
7/14/2017			<0.05			<0.05		<0.05	<0.05
7/19/2017							0.0126 (J)		
3/26/2018		<0.05							
3/27/2018	0.0014 (J)		<0.05		0.0025 (J)	<0.05		<0.05	<0.05
3/28/2018				<0.05					
3/29/2018							0.021 (J)		
6/12/2018	0.0012 (J)	<0.05	<0.05						
6/14/2018				<0.05	0.0011 (J)	<0.05	0.024 (J)	<0.05	
6/15/2018									<0.05
Mean	0.01552	0.025	0.025	0.025	0.01373	0.025	0.01464	0.025	0.025
Std. Dev.	0.01224	0	0	0	0.01198	0	0.004356	0	0
Upper Lim.	0.025	0.025	0.025	0.025	0.025	0.025	0.021	0.025	0.025
Lower Lim.	0.0012	0.025	0.025	0.025	0.0011	0.025	0.0114	0.025	0.025

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0079	<0.05	<0.05	0.016				
6/9/2016					0.0057	0.0074		
6/10/2016							<0.05	
8/11/2016	0.0093 (J)							
8/12/2016				0.0202 (J)				
8/15/2016		<0.05						
8/17/2016							<0.05	
8/18/2016			<0.05		0.0061 (J)	0.0078 (J)		
10/6/2016	0.0102 (J)							
10/7/2016							<0.05	
10/10/2016		<0.05	<0.05	0.0194 (J)	0.006 (J)	0.0093 (J)		
12/6/2016	0.0094 (J)							
12/7/2016				0.0265 (J)	0.0066 (J)	0.0117 (J)		
12/8/2016		<0.05	<0.05				<0.05	
1/23/2017								0.0171 (J)
2/7/2017								0.0196 (J)
2/15/2017	<0.05							
2/17/2017			<0.05	0.0253 (J)				
2/20/2017		<0.05			0.0053 (J)	0.011 (J)		
2/21/2017							<0.05	
3/27/2017								0.0192 (J)
4/17/2017								0.0169 (J)
4/18/2017	0.0086 (J)							
4/19/2017			<0.05	0.0233 (J)	0.0055 (J)	0.0105 (J)		
4/20/2017		<0.05						
4/21/2017							<0.05	
5/22/2017								0.0167 (J)
6/1/2017		<0.05	<0.05	0.023 (J)				
6/2/2017	0.0102 (J)							
6/5/2017					0.0068 (J)	0.0108 (J)		0.0177 (J)
6/6/2017							<0.05	
6/15/2017							<0.05	
7/11/2017								0.0203 (J)
7/14/2017	0.0092 (J)							
7/17/2017		<0.05			<0.05	0.0095 (J)		
7/18/2017			<0.05	0.0207 (J)				
7/19/2017							<0.05	
8/23/2017								0.0182 (J)
3/26/2018								0.0063 (J)
3/27/2018	0.0087 (J)							
3/28/2018		<0.05	<0.05	0.013 (J)				
3/29/2018					0.0053 (J)	0.014 (J)	<0.05	
6/13/2018	0.0084 (J)			0.02 (J)	0.0067 (J)	0.014 (J)		
6/14/2018		<0.05	<0.05					
6/15/2018							<0.05	0.0049 (J)
Mean	0.01069	0.025	0.025	0.02074	0.0079	0.0106	0.025	0.01569
Std. Dev.	0.005082	0	0	0.004091	0.006034	0.002249	0	0.00546
Upper Lim.	0.0102	0.025	0.025	0.02439	0.0068	0.01261	0.025	0.01982
Lower Lim.	0.0079	0.025	0.025	0.01709	0.0053	0.008593	0.025	0.01237

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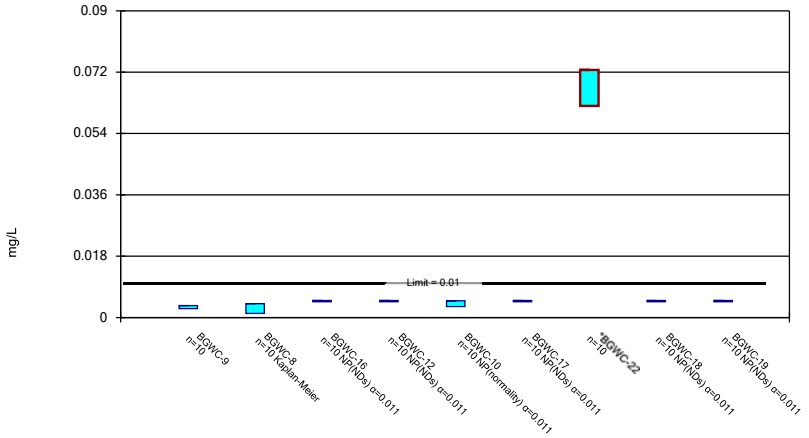
Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Molybdenum Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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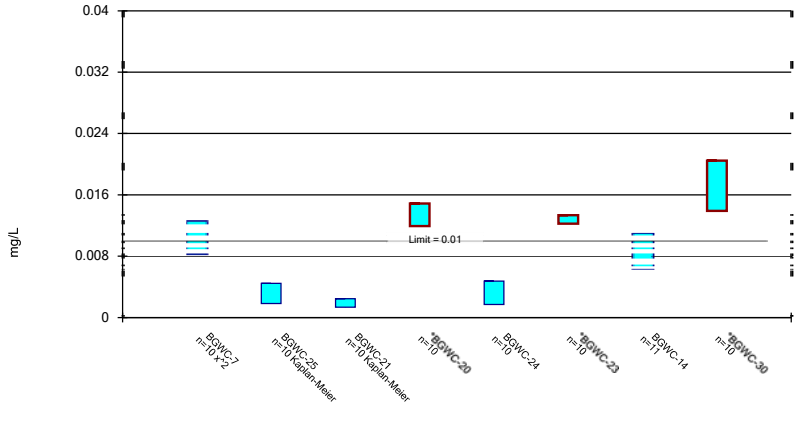
Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



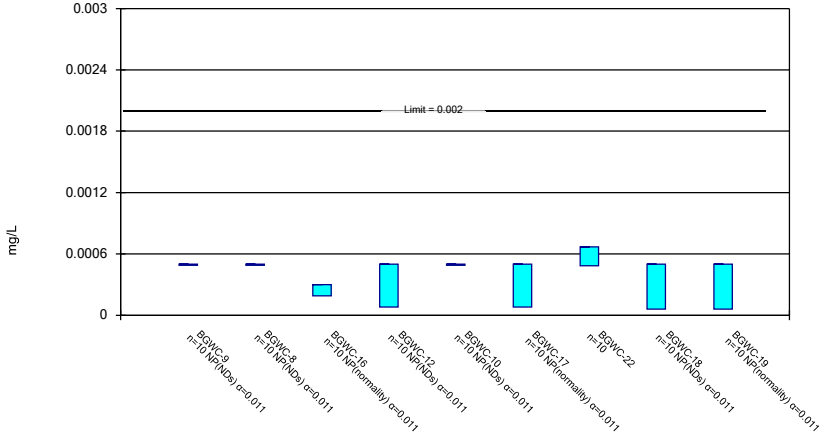
Constituent: Molybdenum Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



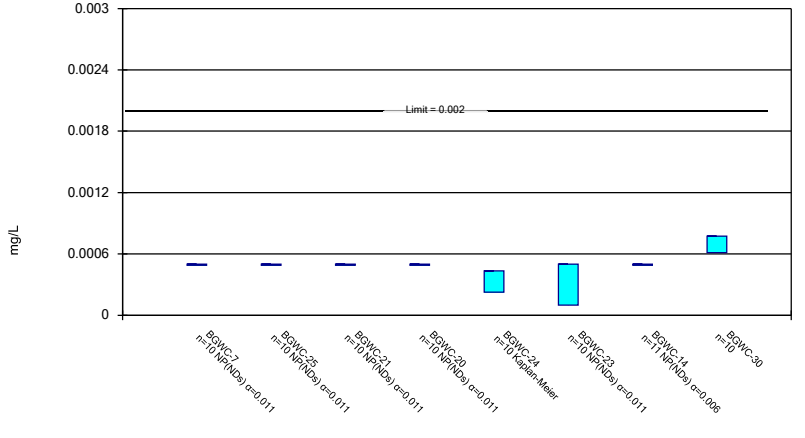
Constituent: Thallium Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Thallium Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.0028 (J)								
6/7/2016		0.00063 (J)	<0.01	<0.01	0.0067 (J)	<0.01			
6/8/2016							0.07	<0.01	<0.01
8/10/2016		0.0039 (J)							
8/11/2016	0.003 (J)		<0.01			<0.01			
8/12/2016				<0.01				<0.01	<0.01
8/16/2016					0.0032 (J)				
8/18/2016							0.0758		
10/4/2016		0.0052 (J)							
10/5/2016	0.0032 (J)								
10/6/2016				<0.01					
10/7/2016			<0.01		0.0032 (J)	<0.01		<0.01	<0.01
10/10/2016							0.0712		
12/2/2016		<0.01							
12/5/2016	0.0033 (J)			<0.01					
12/6/2016			<0.01		0.0049 (J)	<0.01		<0.01	
12/7/2016									<0.01
12/8/2016							0.0682		
2/14/2017		0.0044 (J)							
2/15/2017	0.0027 (J)			<0.01					
2/16/2017			<0.01		0.0039 (J)	<0.01		<0.01	<0.01
2/17/2017							0.066		
4/14/2017		0.0013 (J)							
4/17/2017	0.0025 (J)								
4/18/2017			<0.01	<0.01	0.0032 (J)				
4/19/2017						<0.01		<0.01	<0.01
4/20/2017							0.0662		
5/26/2017	0.0029 (J)	0.0024 (J)							
5/30/2017			<0.01			<0.01			
6/1/2017								<0.01	<0.01
6/2/2017				<0.01	0.0035 (J)				
6/5/2017							0.071		
7/10/2017		0.0013 (J)							
7/11/2017	0.0029 (J)								
7/12/2017					0.0037 (J)				
7/13/2017				<0.01					
7/14/2017			<0.01			<0.01		<0.01	<0.01
7/19/2017							0.0703		
3/26/2018		<0.01							
3/27/2018	0.0031 (J)		<0.01		0.0032 (J)	<0.01		<0.01	<0.01
3/28/2018				<0.01					
3/29/2018							0.056		
6/12/2018	0.0043 (J)	0.0026 (J)	<0.01						
6/14/2018				<0.01	0.0033 (J)	<0.01	0.059	<0.01	
6/15/2018									<0.01
Mean	0.00307	0.003173	0.005	0.005	0.00388	0.005	0.06737	0.005	0.005
Std. Dev.	0.0004923	0.001739	0	0	0.001123	0	0.005941	0	0
Upper Lim.	0.003509	0.004084	0.005	0.005	0.0049	0.005	0.07267	0.005	0.005
Lower Lim.	0.002631	0.001181	0.005	0.005	0.0032	0.005	0.06207	0.005	0.005

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0088 (J)	0.0064 (J)	0.0027 (J)	0.011 (J)				
6/9/2016					0.0024 (J)	0.013 (J)		
6/10/2016							0.014 (J)	
8/11/2016	0.01							
8/12/2016				0.0127				
8/15/2016		0.0039 (J)						
8/17/2016							0.0085 (J)	
8/18/2016			0.0023 (J)		0.0034 (J)	0.0136		
10/6/2016	0.0117							
10/7/2016							0.0072 (J)	
10/10/2016		0.0029 (J)	0.0025 (J)	0.0136	0.0047 (J)	0.0134		
12/6/2016	0.0102							
12/7/2016				0.0139	0.0066 (J)	0.0128		
12/8/2016		<0.01	<0.01				0.0082 (J)	
1/23/2017								0.0125
2/7/2017								0.0163
2/15/2017	0.0018 (J)							
2/17/2017			<0.01	0.0148				
2/20/2017		0.0024 (J)			0.0026 (J)	0.0122		
2/21/2017							0.0076 (J)	
3/27/2017								0.0157
4/17/2017								0.0178
4/18/2017	0.0103							
4/19/2017			0.0014 (J)	0.012	0.002 (J)	0.0124		
4/20/2017		0.0019 (J)						
4/21/2017							0.0052 (J)	
5/22/2017								0.0208
6/1/2017		0.0026 (J)	0.0012 (J)	0.0125				
6/2/2017	0.0129							
6/5/2017					0.0015 (J)	0.0115		0.0191
6/6/2017							0.0079 (J)	
6/15/2017							0.0052 (J)	
7/11/2017								0.0218
7/14/2017	0.0129							
7/17/2017		0.0024 (J)			0.0013 (J)	0.0131		
7/18/2017			0.0013 (J)	0.0155				
7/19/2017							0.0073 (J)	
8/23/2017								0.0218
3/26/2018								0.014
3/27/2018	0.01							
3/28/2018		<0.01	<0.01	0.012				
3/29/2018					0.0027 (J)	0.013	0.012	
6/13/2018	0.013			0.016	<0.01	0.013		
6/14/2018		<0.01	<0.01					
6/15/2018							0.012	0.012
Mean	0.01016	0.00375	0.00314	0.0134	0.00322	0.0128	0.008645	0.01718
Std. Dev.	0.003287	0.001522	0.001677	0.001647	0.001709	0.0006164	0.002841	0.003677
Upper Lim.	0.01258	0.004457	0.002448	0.01487	0.004745	0.01335	0.01101	0.02046
Lower Lim.	0.008226	0.001829	0.001352	0.01193	0.001695	0.01225	0.006278	0.0139

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.001								
6/7/2016		<0.001	0.0002 (J)	<0.001	<0.001	8.5E-05 (J)			
6/8/2016							0.00035 (J)	<0.001	8.5E-05 (J)
8/10/2016		<0.001							
8/11/2016	<0.001		0.0002 (J)			8E-05 (J)			
8/12/2016				9E-05 (J)				6E-05 (J)	8E-05 (J)
8/16/2016					<0.001				
8/18/2016							0.0005 (J)		
10/4/2016		<0.001							
10/5/2016	<0.001								
10/6/2016				<0.001					
10/7/2016			0.0002 (J)		<0.001	<0.001		<0.001	<0.001
10/10/2016							0.0006 (J)		
12/2/2016		<0.001							
12/5/2016	<0.001			<0.001					
12/6/2016			0.0003 (J)		<0.001	<0.001		<0.001	
12/7/2016									<0.001
12/8/2016							0.0005 (J)		
2/14/2017		<0.001							
2/15/2017	<0.001			<0.001					
2/16/2017			0.0003 (J)		<0.001	<0.001		<0.001	<0.001
2/17/2017							0.0006 (J)		
4/14/2017		<0.001							
4/17/2017	<0.001								
4/18/2017			0.0002 (J)	9E-05 (J)	<0.001				
4/19/2017						8E-05 (J)		<0.001	6E-05 (J)
4/20/2017							0.0006 (J)		
5/26/2017	<0.001	<0.001							
5/30/2017			0.0002 (J)			9E-05 (J)			
6/1/2017								<0.001	8E-05 (J)
6/2/2017				<0.001	<0.001				
6/5/2017							0.0006 (J)		
7/10/2017		<0.001							
7/11/2017	<0.001								
7/12/2017					<0.001				
7/13/2017				8E-05 (J)					
7/14/2017			0.0002 (J)			9E-05 (J)		<0.001	8E-05 (J)
7/19/2017							0.0007 (J)		
3/26/2018		<0.001							
3/27/2018	<0.001		0.00019 (J)		<0.001	<0.001		<0.001	<0.001
3/28/2018				<0.001					
3/29/2018							0.00063 (J)		
6/12/2018	<0.001	<0.001	0.0002 (J)						
6/14/2018				<0.001	<0.001	<0.001	0.00069 (J)	<0.001	
6/15/2018									<0.001
Mean	0.0005	0.0005	0.000219	0.000376	0.0005	0.0002925	0.000577	0.000456	0.0002885
Std. Dev.	0	0	4.28E-05	0.0001997	0	0.0002187	0.0001034	0.0001391	0.000223
Upper Lim.	0.0005	0.0005	0.0003	0.0005	0.0005	0.0005	0.0006692	0.0005	0.0005
Lower Lim.	0.0005	0.0005	0.00019	8E-05	0.0005	8E-05	0.0004848	6E-05	6E-05

Confidence Interval

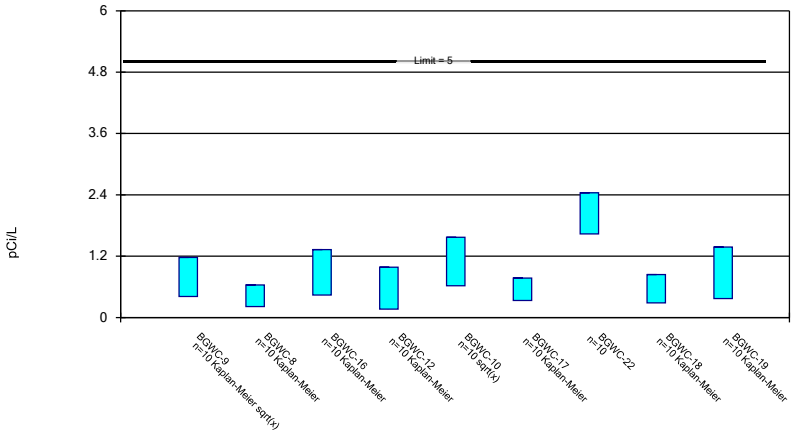
Constituent: Thallium (mg/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	<0.001	<0.001	<0.001	<0.001				
6/9/2016					0.00022 (J)	0.0001 (J)		
6/10/2016							<0.001	
8/11/2016	<0.001							
8/12/2016				<0.001				
8/15/2016		<0.001						
8/17/2016							<0.001	
8/18/2016			<0.001		<0.001	<0.001		
10/6/2016	<0.001							
10/7/2016							<0.001	
10/10/2016		<0.001	<0.001	<0.001	0.0003 (J)	<0.001		
12/6/2016	<0.001							
12/7/2016				<0.001	<0.001	<0.001		
12/8/2016		<0.001	<0.001				<0.001	
1/23/2017								0.0008 (J)
2/7/2017								0.0008 (J)
2/15/2017	<0.001							
2/17/2017			<0.001	<0.001				
2/20/2017		<0.001			0.0003 (J)	<0.001		
2/21/2017							<0.001	
3/27/2017								0.0006 (J)
4/17/2017								0.0007 (J)
4/18/2017	<0.001							
4/19/2017			<0.001	<0.001	0.0004 (J)	<0.001		
4/20/2017		<0.001						
4/21/2017							<0.001	
5/22/2017								0.0008 (J)
6/1/2017		<0.001	<0.001	<0.001				
6/2/2017	<0.001							
6/5/2017					0.0004 (J)	<0.001		0.0007 (J)
6/6/2017							<0.001	
6/15/2017							<0.001	
7/11/2017								0.0007 (J)
7/14/2017	<0.001							
7/17/2017		<0.001			0.0004 (J)	<0.001		
7/18/2017			<0.001	<0.001				
7/19/2017							<0.001	
8/23/2017								0.0007 (J)
3/26/2018								0.00058 (J)
3/27/2018	<0.001							
3/28/2018		<0.001	<0.001	<0.001				
3/29/2018					0.00048 (J)	<0.001	<0.001	
6/13/2018	<0.001			<0.001	0.00053 (J)	<0.001		
6/14/2018		<0.001	<0.001					
6/15/2018							<0.001	0.00056 (J)
Mean	0.0005	0.0005	0.0005	0.0005	0.000403	0.00046	0.0005	0.000694
Std. Dev.	0	0	0	0	0.0001031	0.0001265	0	9.046E-05
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0004347	0.0005	0.0005	0.0007747
Lower Lim.	0.0005	0.0005	0.0005	0.0005	0.0002262	0.0001	0.0005	0.0006133

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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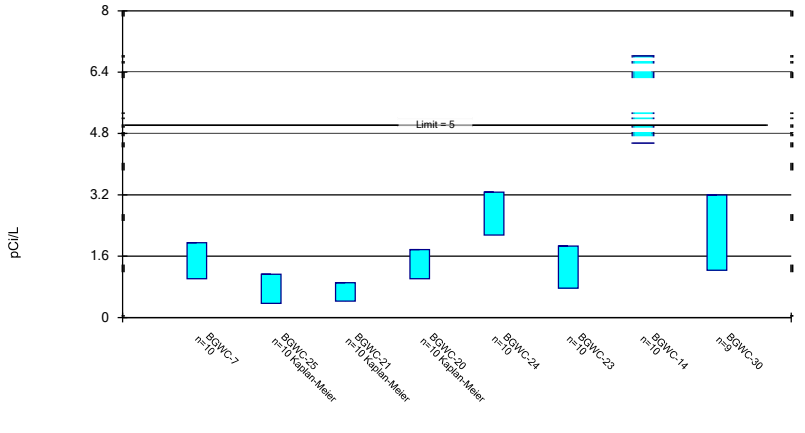
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.488								
6/7/2016		<1.24	<1.24	<1.24	0.616	<1.24			
6/8/2016							1.53	0.406	<1.24
8/10/2016		0.862							
8/11/2016	0.639		1.71			0.808			
8/12/2016				0.849				1.39	1.18
8/16/2016					1.08				
8/18/2016							2.47		
10/4/2016		0.48							
10/5/2016	0.945								
10/6/2016				1.57					
10/7/2016			0.485		2.82	0.874		0.451	1.97
10/10/2016							2.11		
12/2/2016		0.219							
12/5/2016	2.2			0.956					
12/6/2016			1.22		0.719	0.131		0.516	
12/7/2016									1.31
12/8/2016							2.64		
2/14/2017		0.636							
2/15/2017	0.74			0.229					
2/16/2017			0.19		0.966	0.471		0.172	0.35
2/17/2017							1.34		
4/14/2017		0.13							
4/17/2017	0.764								
4/18/2017			0.52	0.0114	1.01				
4/19/2017						0.65		0.704	0.974
4/20/2017							2.35		
5/26/2017	0.245	0.349							
5/30/2017			1.21			0.65			
6/1/2017								0.493	0.332
6/2/2017				0.375	1.13				
6/5/2017							1.6		
7/10/2017		<1.24							
7/11/2017	<1.24								
7/12/2017					1.29				
7/13/2017				<1.24					
7/14/2017			<1.24			<1.24		<1.24	1.27
7/19/2017							1.76		
3/26/2018		0.303							
3/27/2018	0.745		1.34		0.779	0.551		0.569	0.169
3/28/2018				0.36					
3/29/2018							2.43		
6/12/2018	<1.24	<1.24	<1.24						
6/14/2018				<1.24	<1.24	<1.24	2.14	<1.24	
6/15/2018									<1.24
Mean	0.8006	0.4839	0.8535	0.621	1.103	0.5995	2.037	0.5941	0.8795
Std. Dev.	0.5255	0.228	0.481	0.437	0.6442	0.201	0.4509	0.3159	0.5623
Upper Lim.	1.176	0.6358	1.329	0.9835	1.57	0.7723	2.439	0.8416	1.379
Lower Lim.	0.4126	0.2153	0.4408	0.1646	0.6218	0.3332	1.635	0.2878	0.3722

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 10/15/2018 9:59 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.854	<1.24	0.573	<1.24				
6/9/2016					2.13	0.704		
8/11/2016	1.24							
8/12/2016				1.74				
8/15/2016		1.2						
8/17/2016							5.18	
8/18/2016			0.44		2.67	1.88		
10/6/2016	2.43							
10/10/2016		1.03	0.933	0.944	3.46	1.48		
12/6/2016	0.958							
12/7/2016				2.29	1.65	2.61		
12/8/2016		1.47	1.02					
1/23/2017								2.71
2/7/2017								3
2/15/2017	1.18							
2/17/2017			0.193	1.35				
2/20/2017		0.547			2.68	0.884		
2/21/2017							5.1	
4/17/2017								2.73
4/18/2017	1.26							
4/19/2017			0.488	1.48	3.81	0.948		
4/20/2017		0.0595						
5/22/2017								3.15 (D)
5/26/2017							7.14	
6/1/2017		0.67	0.837	1.61				
6/2/2017	1.24							
6/5/2017					2.86	1.33		0.86
6/6/2017							4.68	
6/15/2017							5.69	
7/11/2017								1.87
7/12/2017							2.92	
7/14/2017	1.55							
7/17/2017		<1.24			2.87	1.04		
7/18/2017			<1.24					
7/19/2017				1.626				
8/10/2017							6.51	
8/23/2017								3.39
8/25/2017							7.04	
3/26/2018								1.61
3/27/2018	2.15							
3/28/2018		0.507	0.864	0.97				
3/29/2018					2.79	1.65	6.35	
6/13/2018	1.95			<1.24	2.19	<1.24		
6/14/2018		<1.24	<1.24					
6/15/2018							6.2	<1.24
Mean	1.481	0.7344	0.6588	1.325	2.711	1.315	5.681	2.216
Std. Dev.	0.5265	0.3987	0.2547	0.5339	0.6289	0.6136	1.273	1.015
Upper Lim.	1.951	1.129	0.9088	1.771	3.272	1.862	6.817	3.196
Lower Lim.	1.011	0.3689	0.4282	1.014	2.15	0.7671	4.545	1.235

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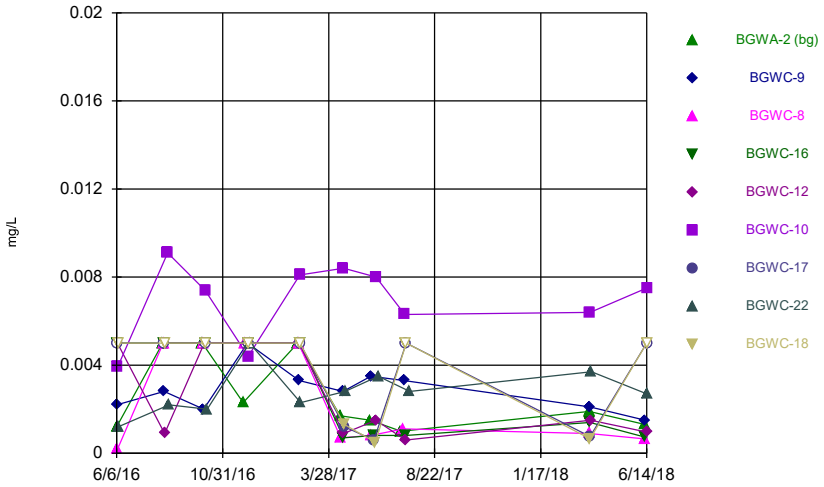
Hollow symbols indicate censored values.

Time Series



Constituent: Arsenic Analysis Run 10/15/2018 10:00 AM
Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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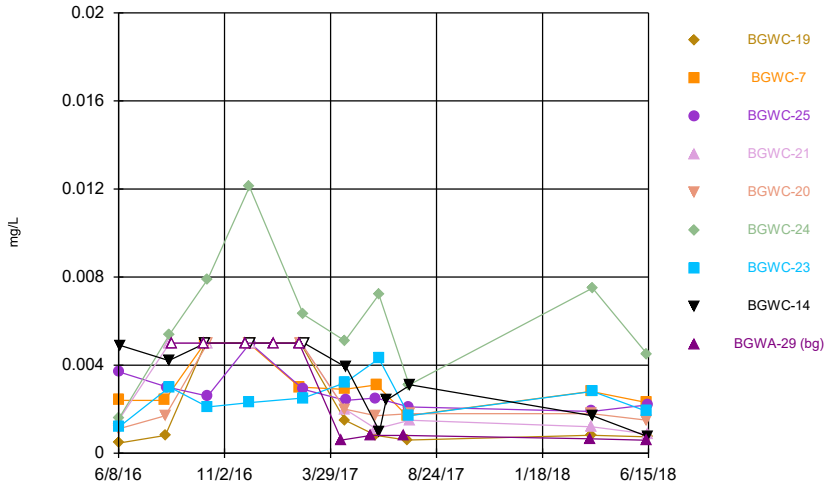
Hollow symbols indicate censored values.

Time Series



Constituent: Arsenic Analysis Run 10/15/2018 10:00 AM
Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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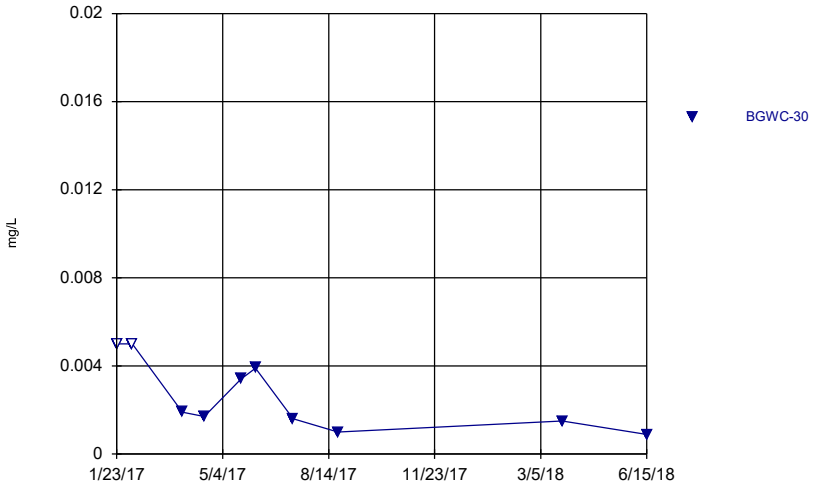
Time Series



Constituent: Arsenic Analysis Run 10/15/2018 10:00 AM
Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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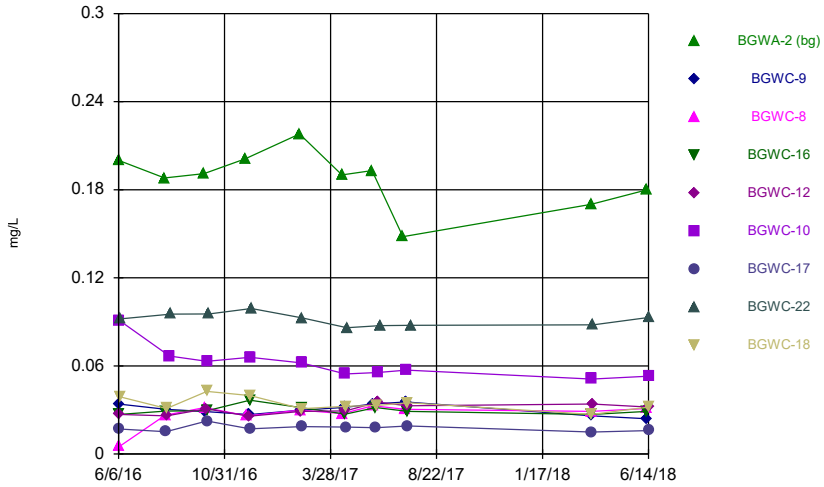
Time Series



Constituent: Barium Analysis Run 10/15/2018 10:00 AM
Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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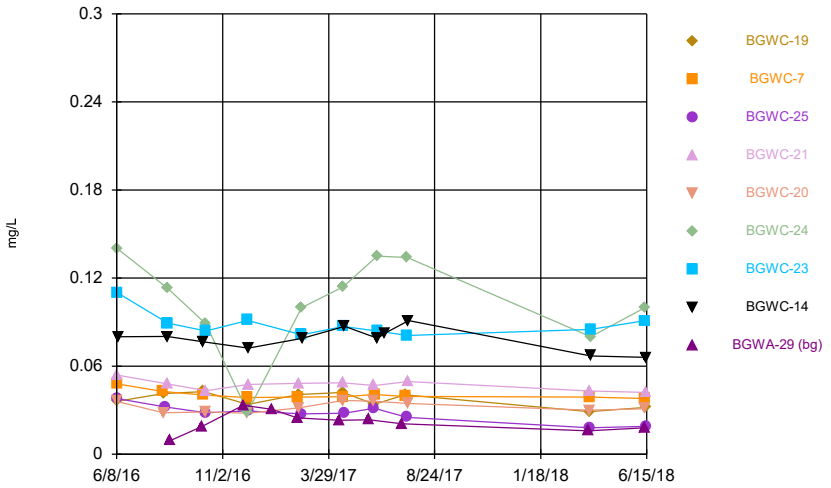
Time Series



Constituent: Barium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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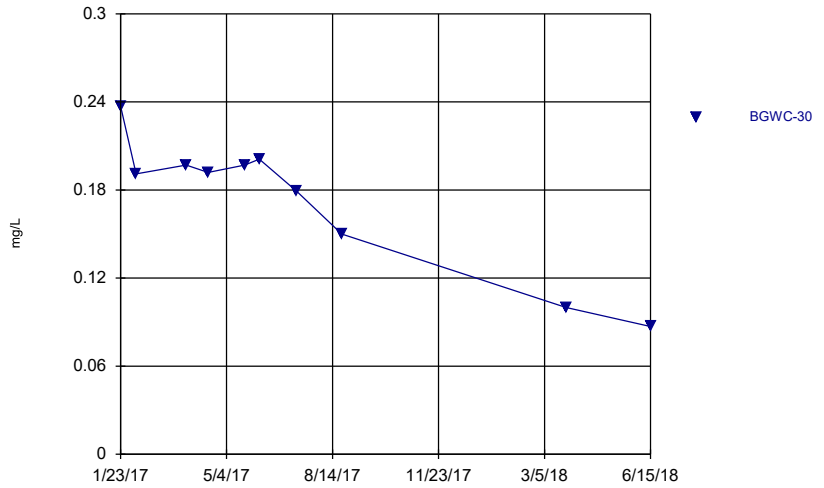
Time Series



Constituent: Barium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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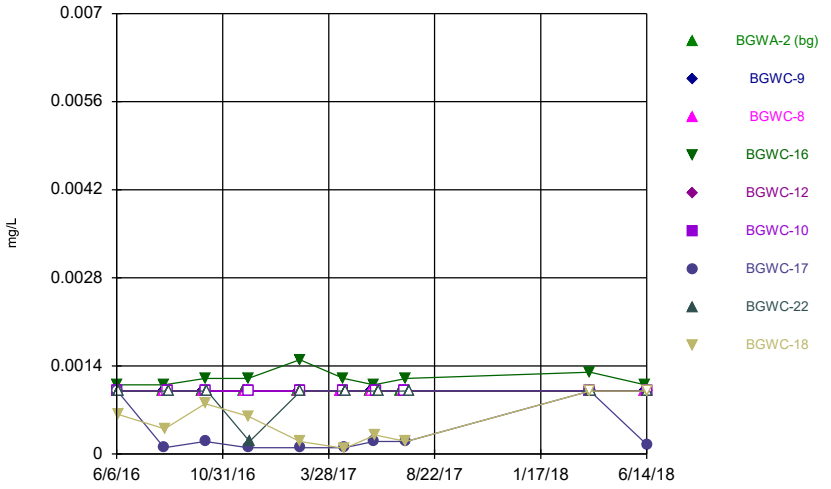
Time Series



Constituent: Cadmium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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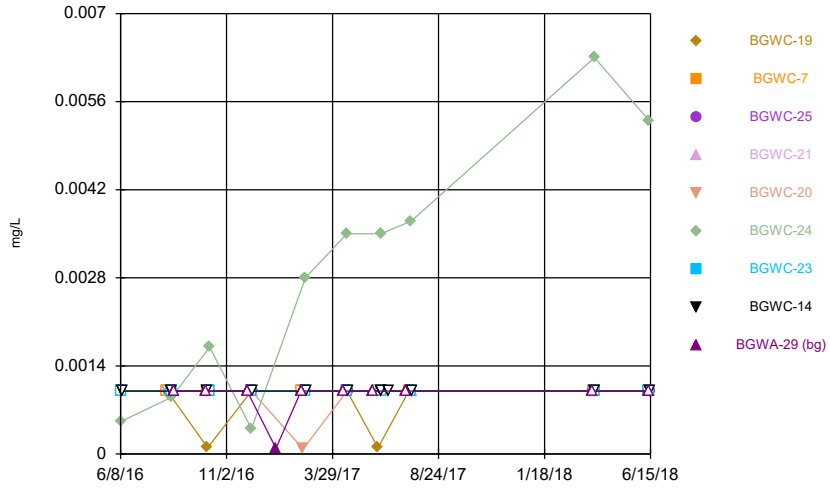
Time Series



Constituent: Cadmium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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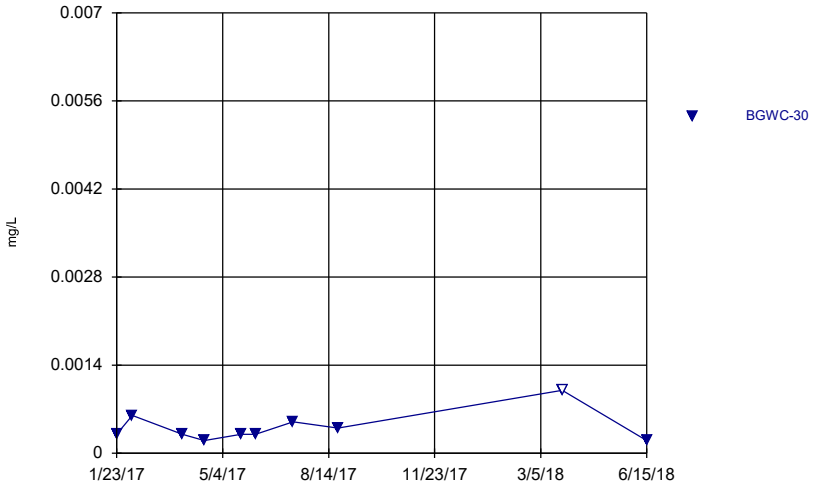
Time Series



Constituent: Cadmium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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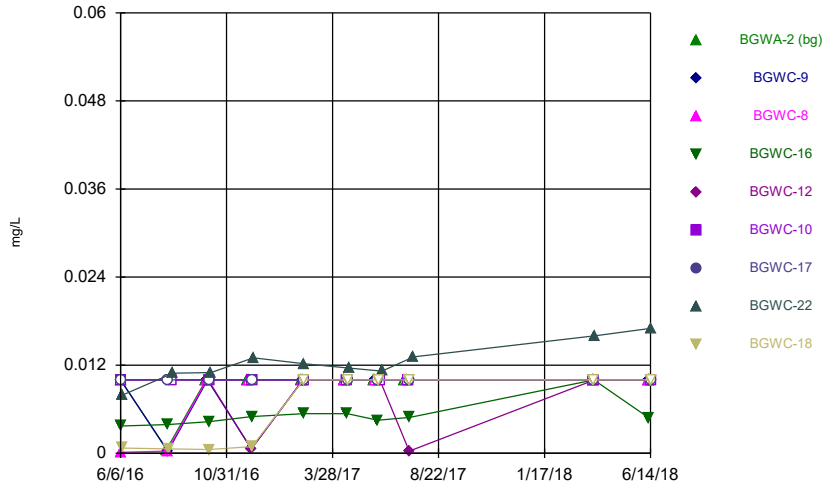
Time Series



Constituent: Cobalt Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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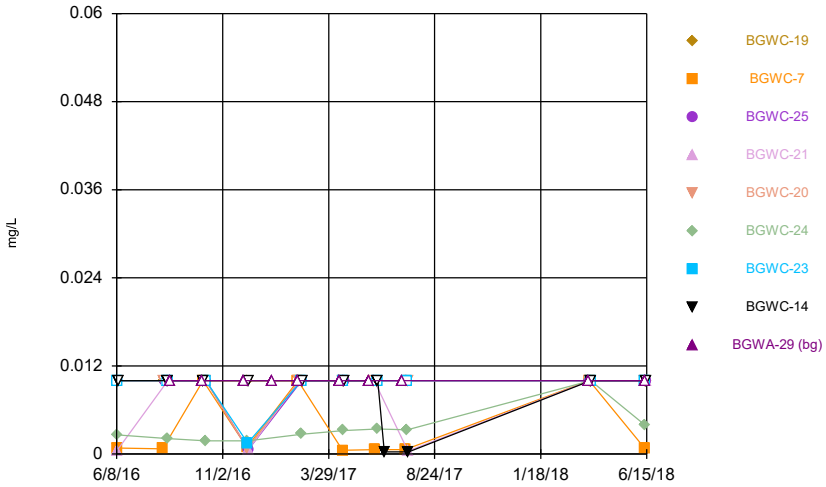
Time Series



Constituent: Cobalt Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

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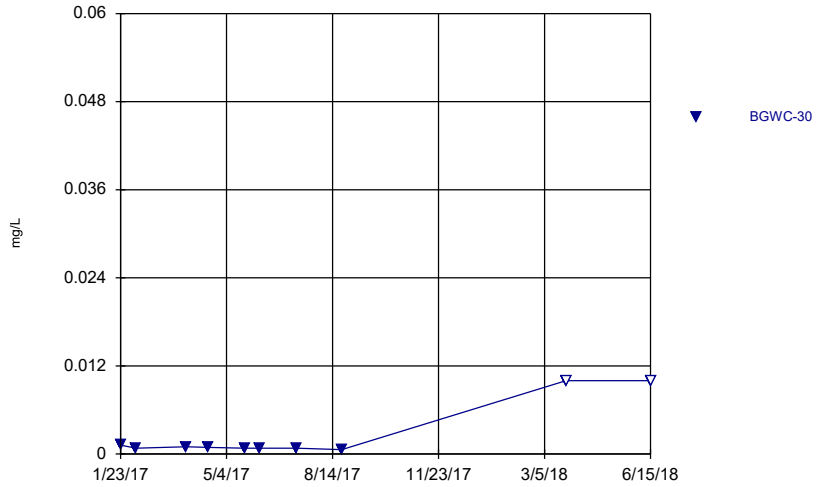

Constituent: Cobalt Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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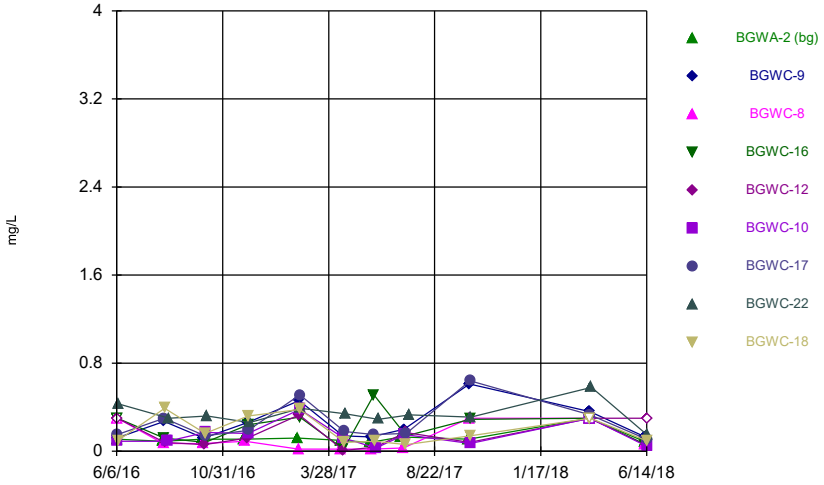
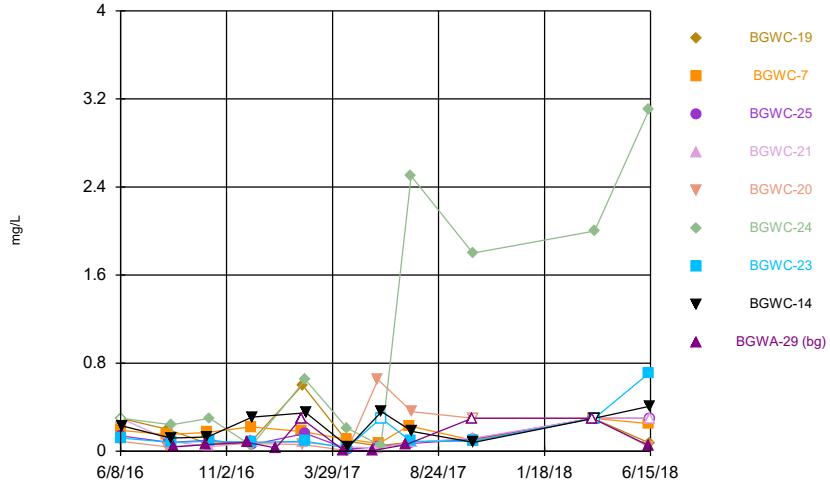


Constituent: Fluoride Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



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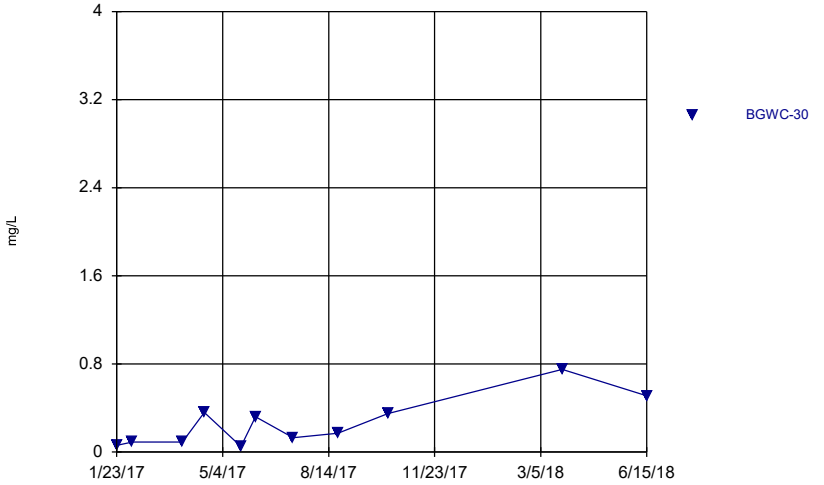
Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

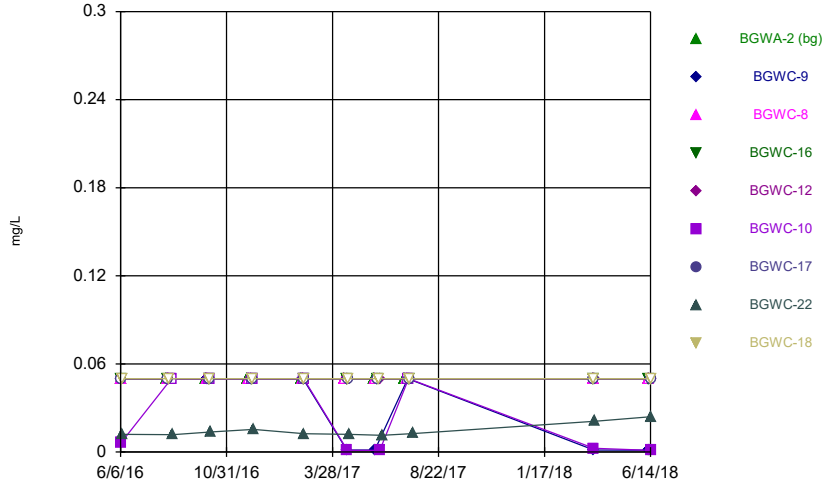


Constituent: Fluoride Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



Constituent: Lithium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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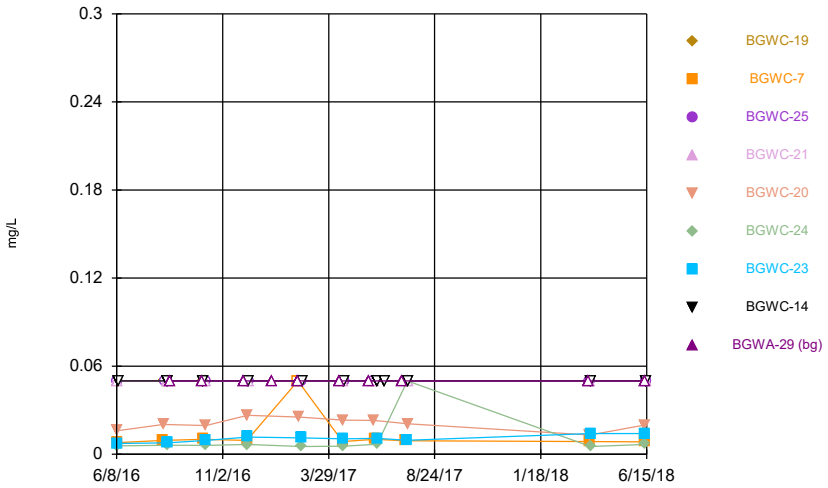
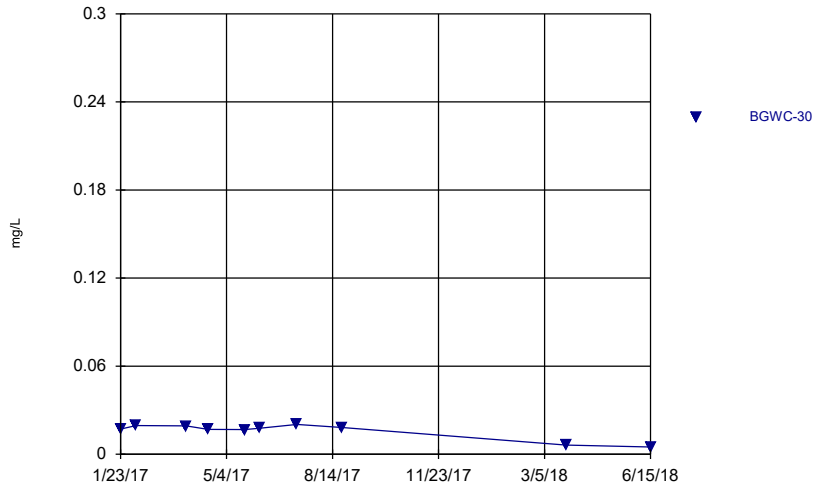


Constituent: Lithium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

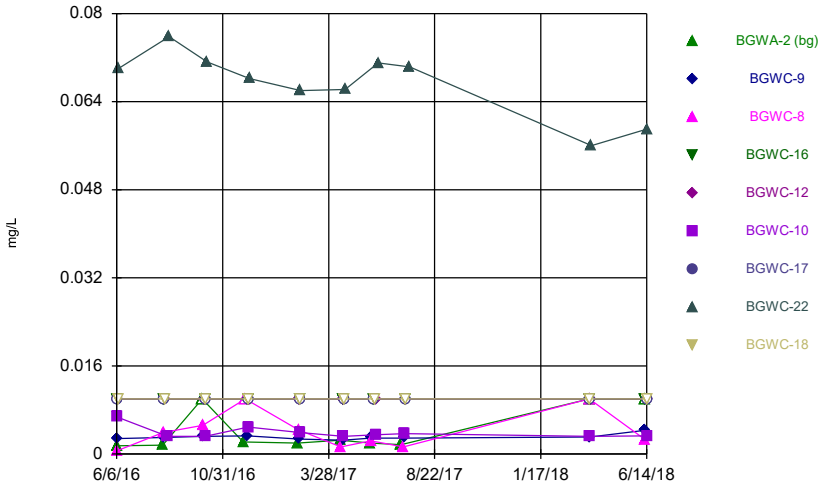


Constituent: Lithium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

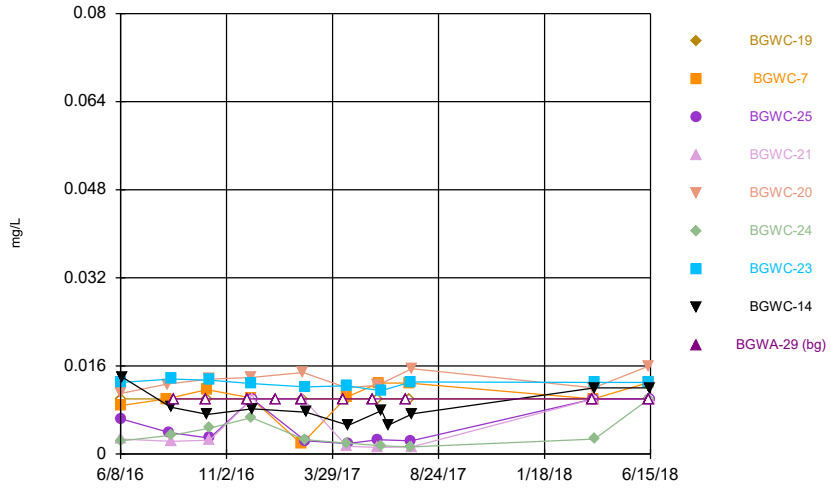


Constituent: Molybdenum Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

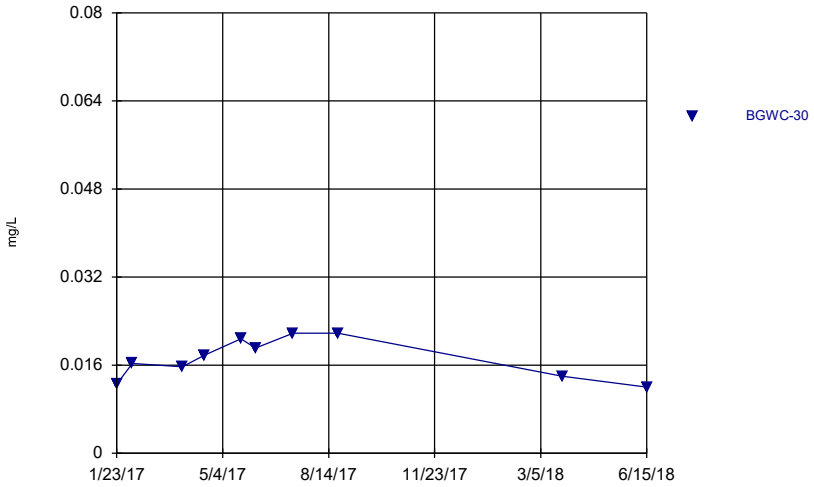


Constituent: Molybdenum Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

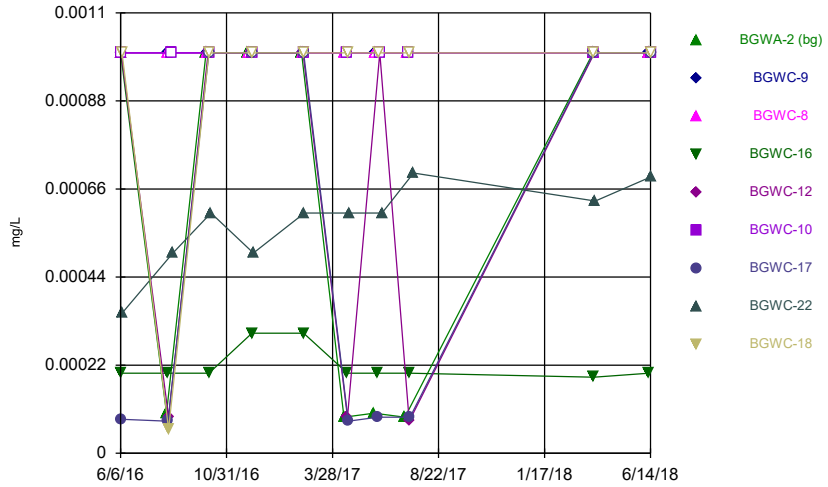


Constituent: Molybdenum Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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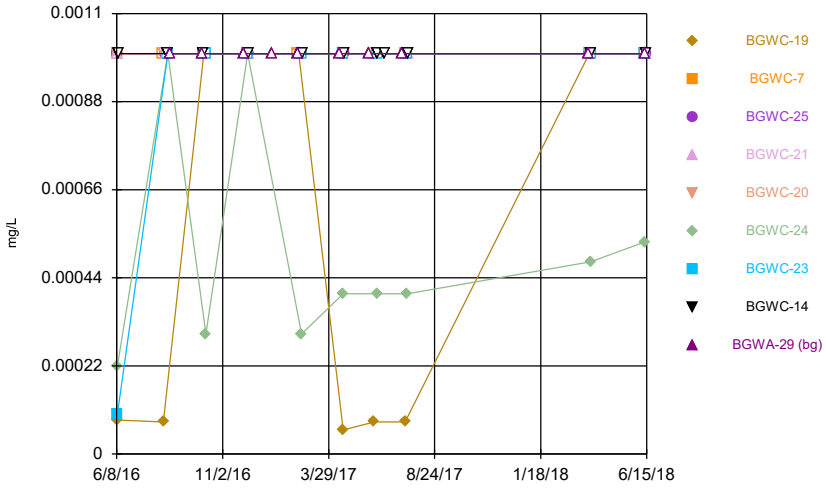
Time Series

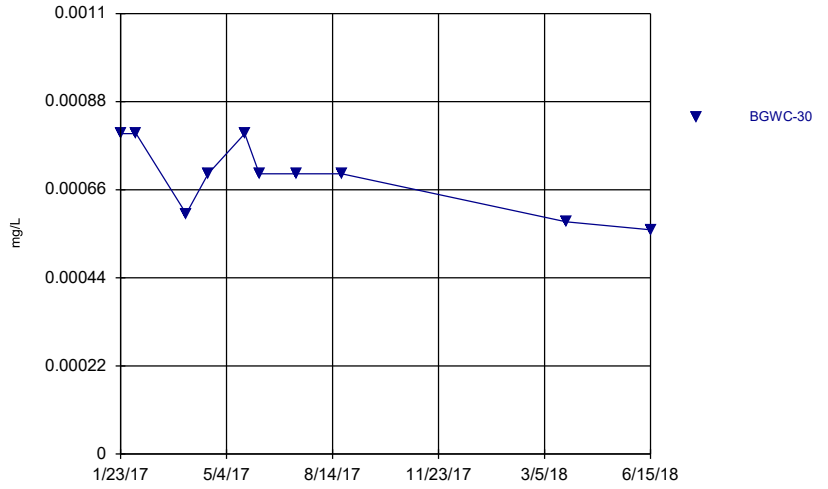


Constituent: Thallium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

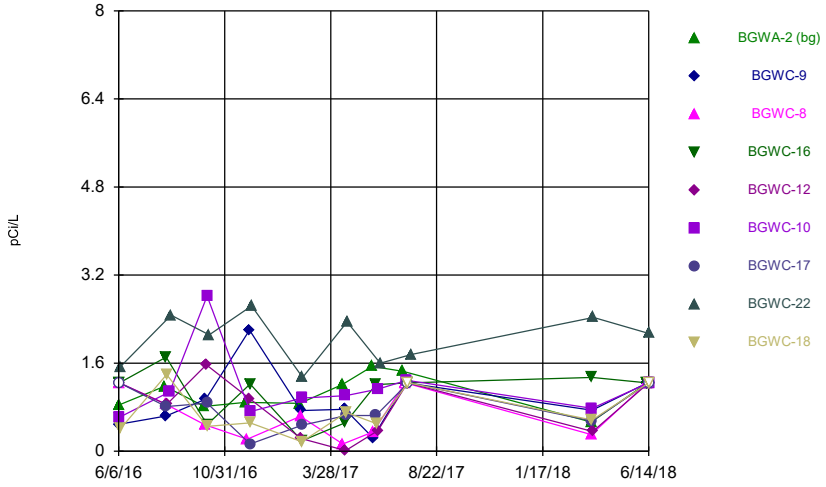


Constituent: Thallium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

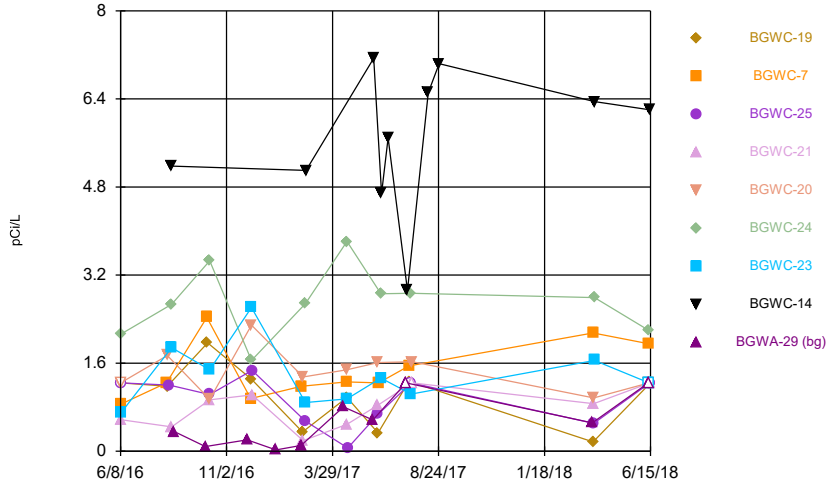


Constituent: Total Radium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

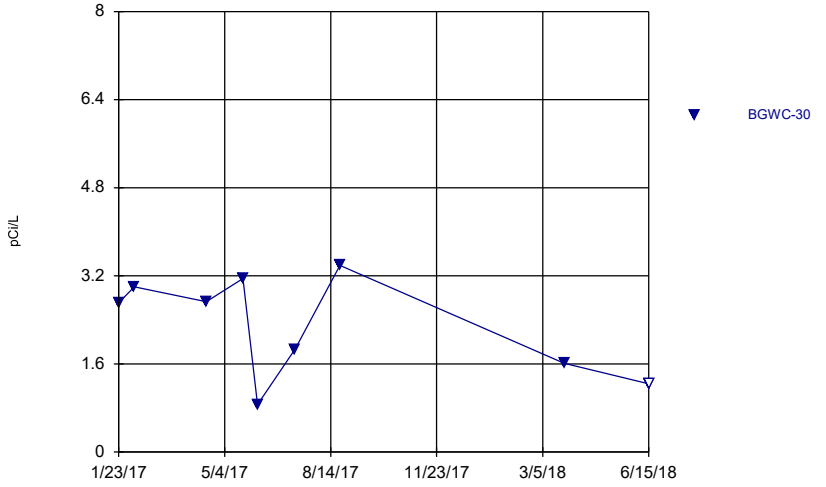


Constituent: Total Radium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



Constituent: Total Radium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

USEPA Based Groundwater Protection Standards Statistical Analysis Package

AM 01

Table B-2
USEPA Based Groundwater Protection Standards
Plant Bowen - Ash Pond 1
Bartow County, Georgia
AM 01

Constituent	CAS	Units	EPA MCL	Statistically Derived Upper Tolerance Limit for Background	GWPS[1]
Antimony	7440-36-0	mg/L	0.006	0.003	0.006
Arsenic	7440-38-2	mg/L	0.01	0.005	0.01
Barium	7440-39-3	mg/L	2	0.218	2
Beryllium	7440-41-7	mg/L	0.004	0.003	0.004
Cadmium	7440-43-9	mg/L	0.005	0.001	0.005
Chromium (III+VI)	7440-47-3	mg/L	0.1	0.01	0.1
Cobalt[2]	7440-48-4	mg/L	0.006	0.005	0.006
Fluoride	16984-48-8	mg/L	4	0.3	4
Lead[3]	7439-92-1	mg/L	0.015	0.005	0.015
Lithium[2]	7439-93-2	mg/L	0.04	0.025	0.04
Mercury	7439-97-6	mg/L	0.002	0.0005	0.002
Molybdenum[2]	7439-98-7	mg/L	0.1	0.01	0.1
Selenium	7782-49-2	mg/L	0.05	0.01	0.05
Thallium	7440-28-0	mg/L	0.002	0.001	0.002
Combined Radium	7440-14-4	pCi/L	5	1.862	5

Notes:

- = Not applicable

EPA MCL - U.S. Environmental Protection Agency, Maximum Contaminant Level

GWPS - Groundwater Protection Standards

mg/L - milligram per liter

N/A - Not Available

pCi/L - Picocuries per liter

[1]GWPS selected as the greater value between the EPA MCL and the background Upper Tolerance Limit.

[2]Regional Screening Level applied for constituent per CCR Rule Ammendment, July 30, 2018.

[3]Currently, there is no EPA MCL established for lead. The value listed is the established EPA Action Level for drinking water.

Tolerance Limit

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 10:15 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	20	40	n/a	0.3585	NP Inter(normal...
Barium (mg/L)	n/a	0.218	n/a	n/a	n/a	20	0	n/a	0.3585	NP Inter(normal...
Beryllium (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	20	95	n/a	0.3585	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	66.67	n/a	0.3972	NP Inter(normal...
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	20	95	n/a	0.3585	NP Inter(NDs)
Fluoride (mg/L)	n/a	0.3	n/a	n/a	n/a	22	18.18	n/a	0.3235	NP Inter(Cohens...
Lead (mg/L)	n/a	0.005	n/a	n/a	n/a	18	88.89	n/a	0.3972	NP Inter(NDs)
Lithium (mg/L)	n/a	0.025	n/a	n/a	n/a	20	100	n/a	0.3585	NP Inter(NDs)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	20	65	n/a	0.3585	NP Inter(normal...
Selenium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	20	80	n/a	0.3585	NP Inter(NDs)
Total Radium (pCi/L)	n/a	1.862	n/a	n/a	n/a	20	15	No	0.05	Inter

Summary of Confidence Intervals - Significant Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 10:22 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**BGWC-22**	**0.01472**	**0.01006**	**0.006**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 10:22 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	BGWC-9	0.003184	0.002016	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.0025	0.00018	0.01	No	10	40	No	0.011	NP (Cohens/xfrm)
Arsenic (mg/L)	BGWC-16	0.0025	0.0007	0.01	No	10	50	No	0.011	NP (normality)
Arsenic (mg/L)	BGWC-12	0.0025	0.0006	0.01	No	10	40	No	0.011	NP (Cohens/xfrm)
Arsenic (mg/L)	BGWC-10	0.008472	0.005428	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-17	0.0025	0.0006	0.01	No	10	70	No	0.011	NP (normality)
Arsenic (mg/L)	BGWC-22	0.003213	0.001927	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	BGWC-18	0.0025	0.0005	0.01	No	10	70	No	0.011	NP (normality)
Arsenic (mg/L)	BGWC-19	0.0025	0.00046	0.01	No	10	30	No	0.011	NP (Cohens/xfrm)
Arsenic (mg/L)	BGWC-7	0.004334	0.002022	0.01	No	10	20	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.003042	0.002118	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	BGWC-21	0.006093	0.001008	0.01	No	10	40	No	0.01	Param.
Arsenic (mg/L)	BGWC-20	0.00493	0.001096	0.01	No	10	30	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008658	0.003482	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.003285	0.001715	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-14	0.005497	0.001939	0.01	No	11	27.27	No	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.004458	0.00109	0.01	No	10	20	No	0.01	Param.
Barium (mg/L)	BGWC-9	0.03354	0.02678	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03181	0.02434	2	No	10	0	x^3	0.01	Param.
Barium (mg/L)	BGWC-16	0.03232	0.02721	2	No	10	0	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-12	0.03323	0.02723	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.07144	0.0524	2	No	10	0	x^(1/3)	0.01	Param.
Barium (mg/L)	BGWC-17	0.01965	0.01571	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09548	0.08786	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.03859	0.02999	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.0415	0.0329	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.0428	0.038	2	No	10	0	No	0.011	NP (normality)
Barium (mg/L)	BGWC-25	0.03297	0.02235	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.05025	0.04389	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03518	0.02902	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-24	0.1328	0.0739	2	No	10	0	No	0.01	Param.
Barium (mg/L)	BGWC-23	0.0912	0.0809	2	No	10	0	No	0.011	NP (normality)
Barium (mg/L)	BGWC-14	0.08451	0.07183	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.2152	0.131	2	No	10	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-9	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-8	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0013	0.0011	0.005	No	10	0	No	0.011	NP (normality)
Cadmium (mg/L)	BGWC-12	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-10	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-17	0.0005	0.0001	0.005	No	10	20	No	0.011	NP (normality)
Cadmium (mg/L)	BGWC-22	0.0005	0.0002	0.005	No	10	90	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-18	0.0009169	0.0002074	0.005	No	10	20	No	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0005	0.0001	0.005	No	10	80	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-7	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-25	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-21	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0005	0.00008	0.005	No	10	90	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.004647	0.001077	0.005	No	10	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-23	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	BGWC-14	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 10:22 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-30	0.0004804	0.0002396	0.005	No	10	10	No	0.01	Param.
Cobalt (mg/L)	BGWC-9	0.0025	0.0003	0.006	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-8	0.0025	0.00013	0.006	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.005234	0.003646	0.006	No	10	10	No	0.01	Param.
Cobalt (mg/L)	BGWC-12	0.0025	0.0003	0.006	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-17	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	**BGWC-22**	**0.01472**	**0.01006**	**0.006**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	BGWC-18	0.0025	0.0005	0.006	No	10	60	No	0.011	NP (normality)
Cobalt (mg/L)	BGWC-19	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-7	0.0025	0.0005	0.006	No	10	30	No	0.011	NP (normality)
Cobalt (mg/L)	BGWC-25	0.0025	0.0006	0.006	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.0025	0.0004	0.006	No	10	70	No	0.011	NP (normality)
Cobalt (mg/L)	BGWC-20	0.0025	0.0008	0.006	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.003365	0.002095	0.006	No	10	10	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.0025	0.0015	0.006	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	BGWC-14	0.0025	0.0003	0.006	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.0025	0.0006	0.006	No	10	20	No	0.011	NP (normality)
Fluoride (mg/L)	BGWC-9	0.3702	0.1293	4	No	11	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.15	0.02	4	No	11	27.27	No	0.006	NP (Cohens/xfrm)
Fluoride (mg/L)	BGWC-16	0.3765	0.09604	4	No	11	18.18	No	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.3192	0.05635	4	No	11	27.27	No	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1979	0.0607	4	No	11	9.091	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.371	0.1337	4	No	11	0	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-22	0.4261	0.2466	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.2666	0.08259	4	No	11	9.091	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-19	0.2	0.05	4	No	11	18.18	No	0.006	NP (Cohens/xfrm)
Fluoride (mg/L)	BGWC-7	0.2126	0.1183	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-25	0.2268	0.04215	4	No	11	18.18	No	0.01	Param.
Fluoride (mg/L)	BGWC-21	0.2712	0.0351	4	No	11	27.27	No	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.36	0.005	4	No	11	18.18	No	0.006	NP (Cohens/xfrm)
Fluoride (mg/L)	BGWC-24	1.737	0.1303	4	No	11	9.091	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.15	0.03	4	No	11	18.18	No	0.006	NP (normality)
Fluoride (mg/L)	BGWC-14	0.319	0.1101	4	No	11	9.091	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.4465	0.07714	4	No	11	0	No	0.01	Param.
Lithium (mg/L)	BGWC-9	0.0125	0.0012	0.04	No	10	60	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-8	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-16	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-12	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-10	0.0125	0.0011	0.04	No	10	50	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-17	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-22	0.021	0.0114	0.04	No	10	0	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-18	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-19	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-7	0.0106	0.008277	0.04	No	10	10	No	0.01	Param.
Lithium (mg/L)	BGWC-25	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-21	0.0125	0.0125	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02439	0.01709	0.04	No	10	0	No	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0068	0.0053	0.04	No	10	10	No	0.011	NP (normality)
Lithium (mg/L)	BGWC-23	0.01261	0.008593	0.04	No	10	0	No	0.01	Param.

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 10:22 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lithium (mg/L)	BGWC-14	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-30	0.01951	0.01349	0.04	No	10	0	x^3	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003486	0.002651	0.1	No	10	0	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.008107	0.0009733	0.1	No	10	20	No	0.01	Param.
Molybdenum (mg/L)	BGWC-16	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-12	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0049	0.0032	0.1	No	10	0	No	0.011	NP (normality)
Molybdenum (mg/L)	BGWC-17	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-22	0.07267	0.06207	0.1	No	10	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-18	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-19	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	BGWC-7	0.01258	0.008226	0.1	No	10	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.01014	0.001892	0.1	No	10	30	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.005	0.0012	0.1	No	10	40	No	0.011	NP (normality)
Molybdenum (mg/L)	BGWC-20	0.01487	0.01193	0.1	No	10	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.004745	0.001695	0.1	No	10	10	No	0.01	Param.
Molybdenum (mg/L)	BGWC-23	0.01335	0.01225	0.1	No	10	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-14	0.01101	0.006278	0.1	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-30	0.02046	0.0139	0.1	No	10	0	No	0.01	Param.
Thallium (mg/L)	BGWC-9	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-8	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-16	0.0003	0.00019	0.002	No	10	0	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-12	0.0005	0.00008	0.002	No	10	70	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-10	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-17	0.0005	0.00008	0.002	No	10	50	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-22	0.0006692	0.0004848	0.002	No	10	0	No	0.01	Param.
Thallium (mg/L)	BGWC-18	0.0005	0.00006	0.002	No	10	90	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-19	0.0005	0.00006	0.002	No	10	50	No	0.011	NP (normality)
Thallium (mg/L)	BGWC-7	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-25	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-21	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-20	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0008228	0.0002423	0.002	No	10	20	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.0005	0.0001	0.002	No	10	90	No	0.011	NP (NDs)
Thallium (mg/L)	BGWC-14	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-30	0.0007747	0.0006133	0.002	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-9	0.945	0.245	5	No	10	20	No	0.011	NP (Cohens/xfrm)
Total Radium (pCi/L)	BGWC-8	1.294	0.2457	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-16	1.724	0.6345	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-12	1.568	0.3231	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-10	1.478	0.6662	5	No	10	10	ln(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-17	1.31	0.4318	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-22	2.439	1.635	5	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-18	0.704	0.172	5	No	10	20	No	0.011	NP (Cohens/xfrm)
Total Radium (pCi/L)	BGWC-19	1.682	0.5145	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-7	1.951	1.011	5	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-25	1.568	0.5161	5	No	10	30	No	0.01	Param.
Total Radium (pCi/L)	BGWC-21	1.198	0.4553	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-20	1.802	0.9656	5	No	10	20	No	0.01	Param.
Total Radium (pCi/L)	BGWC-24	3.272	2.15	5	No	10	0	No	0.01	Param.

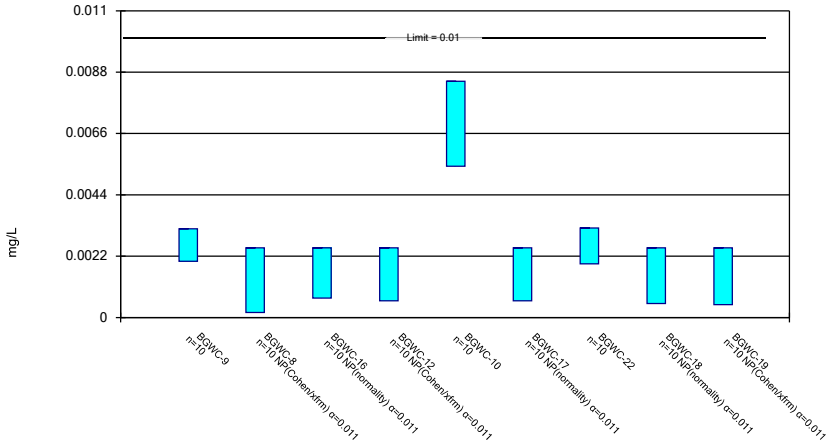
Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 10/15/2018, 10:22 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Total Radium (pCi/L)	BGWC-23	1.862	0.7671	5	No	10	10	No	0.01	Param.
Total Radium (pCi/L)	BGWC-14	6.817	4.545	5	No	10	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-30	3.196	1.235	5	No	9	11.11	No	0.01	Param.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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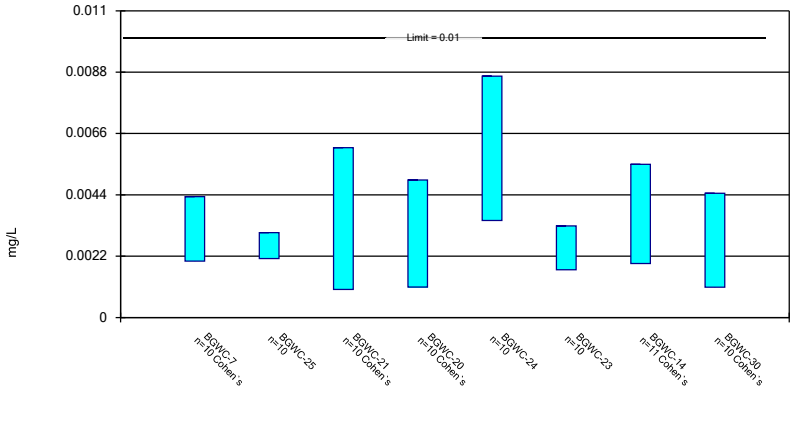
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



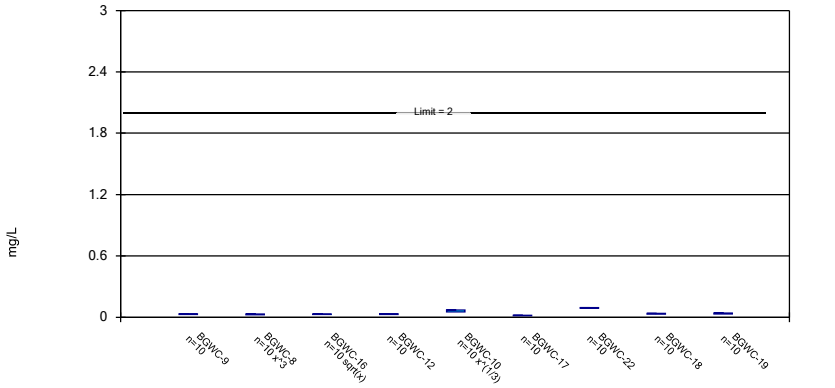
Constituent: Arsenic Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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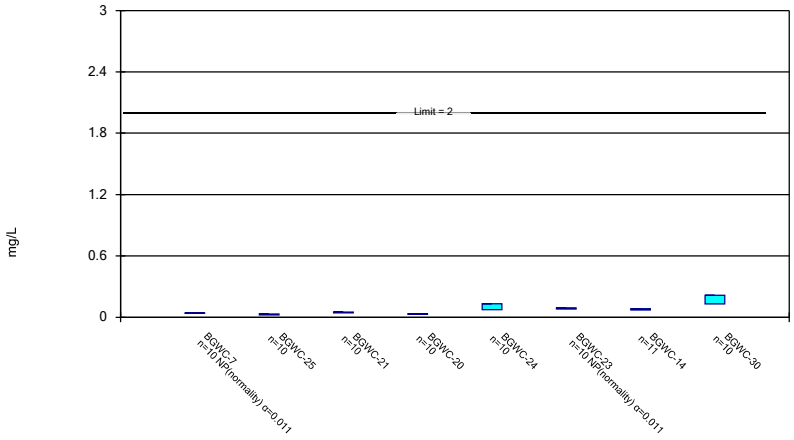
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.0022								
6/7/2016		0.00018 (J)	<0.005	<0.005	0.0039	<0.005			
6/8/2016							0.0012 (J)	<0.005	0.00046 (J)
8/10/2016		<0.005							
8/11/2016	0.0028 (J)		<0.005			<0.005			
8/12/2016				0.0009 (J)				<0.005	0.0008 (J)
8/16/2016					0.0091				
8/18/2016							0.0022 (J)		
10/4/2016		<0.005							
10/5/2016	0.002 (J)								
10/6/2016				<0.005					
10/7/2016			<0.005		0.0074	<0.005		<0.005	<0.005
10/10/2016							0.002 (J)		
12/2/2016		<0.005							
12/5/2016	<0.005			<0.005					
12/6/2016			<0.005		0.0044 (J)	<0.005		<0.005	
12/7/2016									<0.005
12/8/2016							<0.005		
2/14/2017		<0.005							
2/15/2017	0.0033 (J)			<0.005					
2/16/2017			<0.005		0.0081	<0.005		<0.005	<0.005
2/17/2017							0.0023 (J)		
4/14/2017		0.0007 (J)							
4/17/2017	0.0028 (J)								
4/18/2017			0.0007 (J)	0.0009 (J)	0.0084				
4/19/2017						0.0012 (J)		0.0013 (J)	0.0015 (J)
4/20/2017							0.0028 (J)		
5/26/2017	0.0035 (J)	0.0008 (J)							
5/30/2017			0.0008 (J)			0.0006 (J)			
6/1/2017								0.0005 (J)	0.0008 (J)
6/2/2017				0.0015 (J)	0.008				
6/5/2017							0.0035 (J)		
7/10/2017		0.0011 (J)							
7/11/2017	0.0033 (J)								
7/12/2017					0.0063				
7/13/2017				0.0006 (J)					
7/14/2017			0.0008 (J)			<0.005		<0.005	0.0006 (J)
7/19/2017							0.0028 (J)		
3/26/2018		0.0009 (J)							
3/27/2018	0.0021 (J)		0.0014 (J)		0.0064	0.00076 (J)		0.00066 (J)	0.00082 (J)
3/28/2018				0.0015 (J)					
3/29/2018							0.0037 (J)		
6/12/2018	0.0015 (J)	0.00065 (J)	0.00073 (J)						
6/14/2018				0.00096 (J)	0.0075	<0.005	0.0027 (J)	<0.005	
6/15/2018									0.00074 (J)
Mean	0.0026	0.001433	0.001693	0.001636	0.00695	0.002006	0.00257	0.001996	0.001322
Std. Dev.	0.0006549	0.0009469	0.0008724	0.0007914	0.001706	0.0008088	0.0007212	0.0008357	0.000856
Upper Lim.	0.003184	0.0025	0.0025	0.0025	0.008472	0.0025	0.003213	0.0025	0.0025
Lower Lim.	0.002016	0.00018	0.0007	0.0006	0.005428	0.0006	0.001927	0.0005	0.00046

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0024	0.0037	0.0015	0.0011 (J)				
6/9/2016					0.0016	0.0012 (J)		
6/10/2016							0.0049	
8/11/2016	0.0024 (J)							
8/12/2016				0.0017 (J)				
8/15/2016		0.003 (J)						
8/17/2016							0.0042 (J)	
8/18/2016			<0.005		0.0054	0.003 (J)		
10/6/2016	<0.005							
10/7/2016							<0.005	
10/10/2016		0.0026 (J)	<0.005	<0.005	0.0079	0.0021 (J)		
12/6/2016	<0.005							
12/7/2016				<0.005	0.0121	0.0023 (J)		
12/8/2016		<0.005	<0.005				<0.005	
1/23/2017								<0.005
2/7/2017								<0.005
2/15/2017	0.003 (J)							
2/17/2017			<0.005	<0.005				
2/20/2017		0.0029 (J)			0.0063	0.0025 (J)		
2/21/2017							<0.005	
3/27/2017								0.0019 (J)
4/17/2017								0.0017 (J)
4/18/2017	0.0029 (J)							
4/19/2017			0.002 (J)	0.002 (J)	0.0051	0.0032 (J)		
4/20/2017		0.0024 (J)						
4/21/2017							0.0039 (J)	
5/22/2017								0.0034 (J)
6/1/2017		0.0025 (J)	0.0011 (J)	0.0017 (J)				
6/2/2017	0.0031 (J)							
6/5/2017					0.0072	0.0043 (J)		0.0039 (J)
6/6/2017							0.001 (J)	
6/15/2017							0.0024 (J)	
7/11/2017								0.0016 (J)
7/14/2017	0.0017 (J)							
7/17/2017		0.0021 (J)			0.0031 (J)	0.0017 (J)		
7/18/2017			0.0015 (J)	0.0018 (J)				
7/19/2017							0.0031 (J)	
8/23/2017								0.001 (J)
3/26/2018								0.0015 (J)
3/27/2018	0.0028 (J)							
3/28/2018		0.0019 (J)	0.0012 (J)	0.0018 (J)				
3/29/2018					0.0075 (J)	0.0028 (J)	0.0017 (J)	
6/13/2018	0.0023 (J)			0.0015 (J)	0.0045 (J)	0.0019 (J)		
6/14/2018		0.0022 (J)	0.00087 (J)					
6/15/2018							0.00074 (J)	0.00089 (J)
Mean	0.00256	0.00258	0.001817	0.00191	0.00607	0.0025	0.002676	0.002089
Std. Dev.	0.0004115	0.0005181	0.0006576	0.0004701	0.002901	0.0008794	0.001289	0.000985
Upper Lim.	0.004334	0.003042	0.006093	0.00493	0.008658	0.003285	0.005497	0.004458
Lower Lim.	0.002022	0.002118	0.001008	0.001096	0.003482	0.001715	0.001939	0.00109

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.034								
6/7/2016		0.0051	0.027	0.027	0.091	0.017			
6/8/2016							0.092	0.039	0.036
8/10/2016		0.0264							
8/11/2016	0.0305		0.0292			0.0152			
8/12/2016				0.026				0.031	0.0412
8/16/2016					0.0667				
8/18/2016							0.0953		
10/4/2016		0.0316							
10/5/2016	0.0289								
10/6/2016				0.0308					
10/7/2016			0.0295		0.0631	0.0225		0.0427	0.0427
10/10/2016							0.0954		
12/2/2016		0.026							
12/5/2016	0.0269			0.0258					
12/6/2016			0.0367		0.0659	0.0171		0.0398	
12/7/2016									0.0338
12/8/2016							0.0991		
2/14/2017		0.0299							
2/15/2017	0.0299			0.029					
2/16/2017			0.0315		0.0621	0.0187		0.0309	0.0407
2/17/2017							0.0927		
4/14/2017		0.0275							
4/17/2017	0.0318								
4/18/2017			0.0272	0.0294	0.0545				
4/19/2017						0.0183		0.0325	0.042
4/20/2017							0.086		
5/26/2017	0.0341	0.0328							
5/30/2017			0.0316			0.0179			
6/1/2017								0.0331	0.0341
6/2/2017				0.0354	0.0555				
6/5/2017							0.0875		
7/10/2017		0.0305							
7/11/2017	0.0355								
7/12/2017					0.0572				
7/13/2017				0.0329					
7/14/2017			0.029			0.0191		0.0349	0.0405
7/19/2017							0.0877		
3/26/2018		0.029							
3/27/2018	0.026		0.027		0.051	0.015		0.027	0.029
3/28/2018				0.034					
3/29/2018							0.088		
6/12/2018	0.024	0.031	0.029						
6/14/2018				0.032	0.053	0.016	0.093	0.032	
6/15/2018									0.032
Mean	0.03016	0.02698	0.02977	0.03023	0.062	0.01768	0.09167	0.03429	0.0372
Std. Dev.	0.003788	0.008005	0.002942	0.003361	0.01156	0.002203	0.004269	0.004819	0.004823
Upper Lim.	0.03354	0.03181	0.03232	0.03323	0.07144	0.01965	0.09548	0.03859	0.0415
Lower Lim.	0.02678	0.02434	0.02721	0.02723	0.0524	0.01571	0.08786	0.02999	0.0329

Confidence Interval

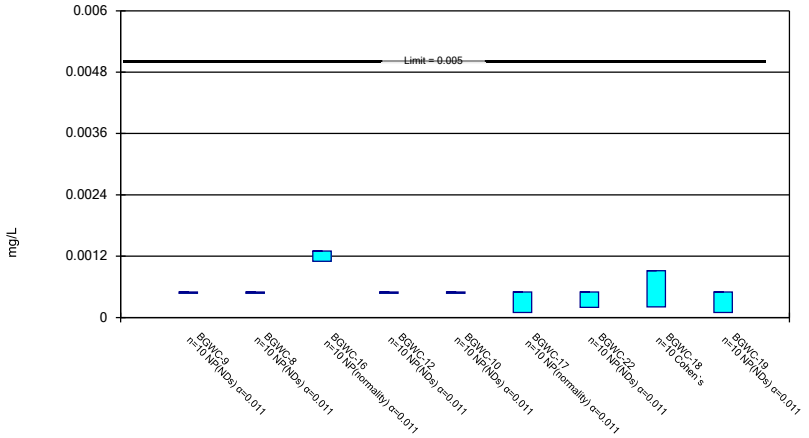
Constituent: Barium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.048	0.038	0.054	0.036				
6/9/2016					0.14	0.11		
6/10/2016							0.08	
8/11/2016	0.0428							
8/12/2016				0.0283				
8/15/2016		0.0321						
8/17/2016							0.0801	
8/18/2016			0.0479		0.113	0.0893		
10/6/2016	0.0404							
10/7/2016							0.0764	
10/10/2016		0.0283	0.0433	0.0288	0.0888	0.0839		
12/6/2016	0.0385							
12/7/2016				0.0279	0.0289	0.0912		
12/8/2016		0.0294	0.0474				0.0723	
1/23/2017								0.237
2/7/2017								0.191
2/15/2017	0.039							
2/17/2017			0.0483	0.0316				
2/20/2017		0.0275			0.0999	0.0813		
2/21/2017							0.0789	
3/27/2017								0.197
4/17/2017								0.192
4/18/2017	0.0392							
4/19/2017			0.0486	0.0367	0.114	0.087		
4/20/2017		0.0279						
4/21/2017							0.0871	
5/22/2017								0.197
6/1/2017		0.0313	0.0468	0.0361				
6/2/2017	0.0407							
6/5/2017					0.135	0.084		0.201
6/6/2017							0.0789	
6/15/2017							0.0822	
7/11/2017								0.179
7/14/2017	0.0394							
7/17/2017		0.0251			0.134	0.0809		
7/18/2017			0.0494	0.0346				
7/19/2017							0.091	
8/23/2017								0.15
3/26/2018								0.1
3/27/2018	0.039							
3/28/2018		0.018	0.043	0.03				
3/29/2018					0.08	0.085	0.067	
6/13/2018	0.038			0.031	0.1	0.091		
6/14/2018		0.019	0.042					
6/15/2018							0.066	0.087
Mean	0.0405	0.02766	0.04707	0.0321	0.1034	0.08836	0.07817	0.1731
Std. Dev.	0.002967	0.005947	0.003569	0.003455	0.03302	0.008444	0.007611	0.04715
Upper Lim.	0.0428	0.03297	0.05025	0.03518	0.1328	0.0912	0.08451	0.2152
Lower Lim.	0.038	0.02235	0.04389	0.02902	0.0739	0.0809	0.07183	0.131

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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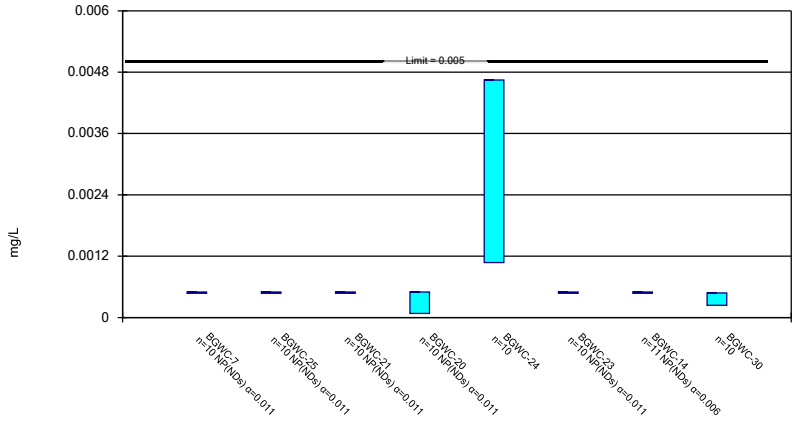
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



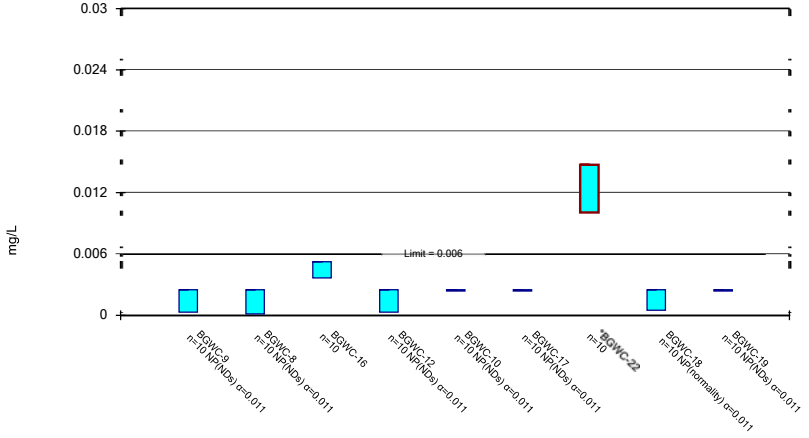
Constituent: Cadmium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

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



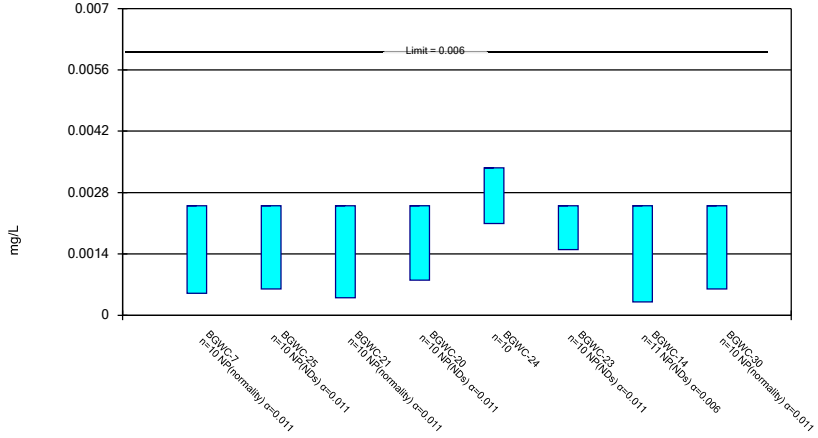
Constituent: Cobalt Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.001								
6/7/2016		<0.001	0.0011 (J)	<0.001	<0.001	<0.001			
6/8/2016							<0.001	0.00063 (J)	<0.001
8/10/2016		<0.001							
8/11/2016	<0.001		0.0011			0.0001 (J)			
8/12/2016				<0.001				0.0004 (J)	<0.001
8/16/2016					<0.001				
8/18/2016							<0.001		
10/4/2016		<0.001							
10/5/2016	<0.001								
10/6/2016				<0.001					
10/7/2016			0.0012		<0.001	0.0002 (J)		0.0008 (J)	0.0001 (J)
10/10/2016							<0.001		
12/2/2016		<0.001							
12/5/2016	<0.001			<0.001					
12/6/2016			0.0012		<0.001	0.0001 (J)		0.0006 (J)	
12/7/2016									<0.001
12/8/2016							0.0002 (J)		
2/14/2017		<0.001							
2/15/2017	<0.001			<0.001					
2/16/2017			0.0015		<0.001	0.0001 (J)		0.0002 (J)	<0.001
2/17/2017							<0.001		
4/14/2017		<0.001							
4/17/2017	<0.001								
4/18/2017			0.0012	<0.001	<0.001				
4/19/2017						0.0001 (J)		9E-05 (J)	<0.001
4/20/2017							<0.001		
5/26/2017	<0.001	<0.001							
5/30/2017			0.0011			0.0002 (J)			
6/1/2017								0.0003 (J)	0.0001 (J)
6/2/2017				<0.001	<0.001				
6/5/2017							<0.001		
7/10/2017		<0.001							
7/11/2017	<0.001								
7/12/2017					<0.001				
7/13/2017				<0.001					
7/14/2017			0.0012			0.0002 (J)		0.0002 (J)	<0.001
7/19/2017							<0.001		
3/26/2018		<0.001							
3/27/2018	<0.001		0.0013		<0.001	<0.001		<0.001	<0.001
3/28/2018				<0.001					
3/29/2018							<0.001		
6/12/2018	<0.001	<0.001	0.0011						
6/14/2018				<0.001	<0.001	0.00015 (J)	<0.001	<0.001	
6/15/2018									<0.001
Mean	0.0005	0.0005	0.0012	0.0005	0.0005	0.000215	0.00047	0.000422	0.00042
Std. Dev.	0	0	0.0001247	0	0	0.0001564	9.487E-05	0.0002246	0.0001687
Upper Lim.	0.0005	0.0005	0.0013	0.0005	0.0005	0.0005	0.0005	0.0009169	0.0005
Lower Lim.	0.0005	0.0005	0.0011	0.0005	0.0005	0.0001	0.0002	0.0002074	0.0001

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	<0.001	<0.001	<0.001	<0.001				
6/9/2016					0.00052 (J)	<0.001		
6/10/2016							<0.001	
8/11/2016	<0.001							
8/12/2016				<0.001				
8/15/2016		<0.001						
8/17/2016							<0.001	
8/18/2016			<0.001		0.0009 (J)	<0.001		
10/6/2016	<0.001							
10/7/2016							<0.001	
10/10/2016		<0.001	<0.001	<0.001	0.0017	<0.001		
12/6/2016	<0.001							
12/7/2016				<0.001	0.0004 (J)	<0.001		
12/8/2016		<0.001	<0.001				<0.001	
1/23/2017								0.0003 (J)
2/7/2017								0.0006 (J)
2/15/2017	<0.001							
2/17/2017			<0.001	8E-05 (J)				
2/20/2017		<0.001			0.0028	<0.001		
2/21/2017							<0.001	
3/27/2017								0.0003 (J)
4/17/2017								0.0002 (J)
4/18/2017	<0.001							
4/19/2017			<0.001	<0.001	0.0035	<0.001		
4/20/2017		<0.001						
4/21/2017							<0.001	
5/22/2017								0.0003 (J)
6/1/2017		<0.001	<0.001	<0.001				
6/2/2017	<0.001							
6/5/2017					0.0035	<0.001		0.0003 (J)
6/6/2017							<0.001	
6/15/2017							<0.001	
7/11/2017								0.0005 (J)
7/14/2017	<0.001							
7/17/2017		<0.001			0.0037	<0.001		
7/18/2017			<0.001	<0.001				
7/19/2017							<0.001	
8/23/2017								0.0004 (J)
3/26/2018								<0.001
3/27/2018	<0.001							
3/28/2018		<0.001	<0.001	<0.001				
3/29/2018					0.0063	<0.001	<0.001	
6/13/2018	<0.001			<0.001	0.0053	<0.001		
6/14/2018		<0.001	<0.001					
6/15/2018							<0.001	0.0002 (J)
Mean	0.0005	0.0005	0.0005	0.000458	0.002862	0.0005	0.0005	0.00036
Std. Dev.	0	0	0	0.0001328	0.002001	0	0	0.000135
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.004647	0.0005	0.0005	0.0004804
Lower Lim.	0.0005	0.0005	0.0005	8E-05	0.001077	0.0005	0.0005	0.0002396

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.005								
6/7/2016		0.00013 (J)	0.0037	<0.005	<0.005	<0.005			
6/8/2016							0.0079	0.00071 (J)	<0.005
8/10/2016		0.0003 (J)							
8/11/2016	0.0003 (J)		0.0039 (J)			<0.005			
8/12/2016				<0.005				0.0006 (J)	<0.005
8/16/2016					<0.005				
8/18/2016							0.0109		
10/4/2016		<0.005							
10/5/2016	<0.005								
10/6/2016				<0.005					
10/7/2016			0.0043 (J)		<0.005	<0.005		0.0005 (J)	<0.005
10/10/2016							0.011		
12/2/2016		<0.005							
12/5/2016	0.0006 (J)			0.0006 (J)					
12/6/2016			0.005 (J)		<0.005	<0.005		0.0009 (J)	
12/7/2016									<0.005
12/8/2016							0.013		
2/14/2017		<0.005							
2/15/2017	<0.005			<0.005					
2/16/2017			0.0054 (J)		<0.005	<0.005		<0.005	<0.005
2/17/2017							0.0122		
4/14/2017		<0.005							
4/17/2017	<0.005								
4/18/2017			0.0054 (J)	<0.005	<0.005				
4/19/2017						<0.005		<0.005	<0.005
4/20/2017							0.0116		
5/26/2017	<0.005	<0.005							
5/30/2017			0.0045 (J)			<0.005			
6/1/2017								<0.005	<0.005
6/2/2017				<0.005	<0.005				
6/5/2017							0.0112		
7/10/2017		<0.005							
7/11/2017	<0.005								
7/12/2017					<0.005				
7/13/2017				0.0003 (J)					
7/14/2017			0.0049 (J)			<0.005		<0.005	<0.005
7/19/2017							0.0131		
3/26/2018		<0.005							
3/27/2018	<0.005		<0.005		<0.005	<0.005		<0.005	<0.005
3/28/2018				<0.005					
3/29/2018							0.016		
6/12/2018	<0.005	<0.005	0.0048 (J)						
6/14/2018				<0.005	<0.005	<0.005	0.017	<0.005	
6/15/2018									<0.005
Mean	0.00209	0.002043	0.00444	0.00209	0.0025	0.0025	0.01239	0.001771	0.0025
Std. Dev.	0.0008672	0.0009643	0.0008897	0.0008672	0	0	0.002615	0.0009463	0
Upper Lim.	0.0025	0.0025	0.005234	0.0025	0.0025	0.0025	0.01472	0.0025	0.0025
Lower Lim.	0.0003	0.00013	0.003646	0.0003	0.0025	0.0025	0.01006	0.0005	0.0025

Confidence Interval

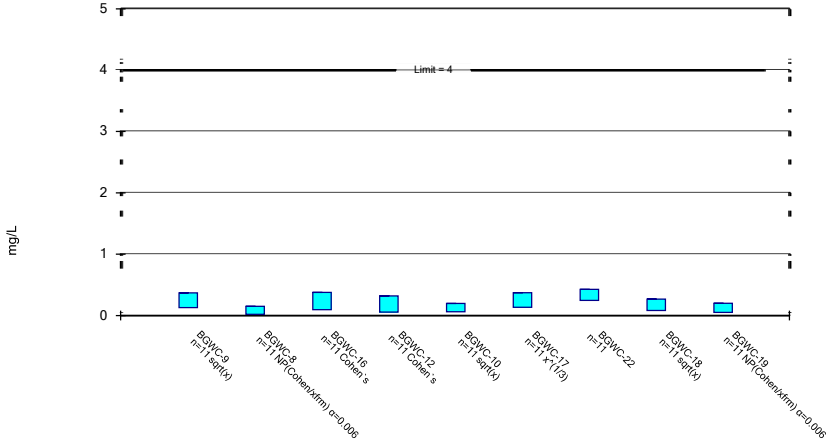
Constituent: Cobalt (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.00081 (J)	<0.005	0.00041 (J)	<0.005				
6/9/2016					0.0026	<0.005		
6/10/2016							<0.005	
8/11/2016	0.0007 (J)							
8/12/2016				<0.005				
8/15/2016		<0.005						
8/17/2016							<0.005	
8/18/2016			<0.005		0.0021 (J)	<0.005		
10/6/2016	<0.005							
10/7/2016							<0.005	
10/10/2016		<0.005	<0.005	<0.005	0.0018 (J)	<0.005		
12/6/2016	0.0009 (J)							
12/7/2016				0.0008 (J)	0.0018 (J)	0.0015 (J)		
12/8/2016		0.0006 (J)	0.0006 (J)				<0.005	
1/23/2017								0.0012 (J)
2/7/2017								0.0008 (J)
2/15/2017	<0.005							
2/17/2017			<0.005	<0.005				
2/20/2017		<0.005			0.0027 (J)	<0.005		
2/21/2017							<0.005	
3/27/2017								0.001 (J)
4/17/2017								0.0009 (J)
4/18/2017	0.0005 (J)							
4/19/2017			<0.005	<0.005	0.0032 (J)	<0.005		
4/20/2017		<0.005						
4/21/2017							<0.005	
5/22/2017								0.0008 (J)
6/1/2017		<0.005	<0.005	<0.005				
6/2/2017	0.0006 (J)							
6/5/2017					0.0034 (J)	<0.005		0.0008 (J)
6/6/2017							<0.005	
6/15/2017							0.0003 (J)	
7/11/2017								0.0008 (J)
7/14/2017	0.0006 (J)							
7/17/2017		<0.005			0.0033 (J)	<0.005		
7/18/2017			0.0004 (J)	<0.005				
7/19/2017							0.0003 (J)	
8/23/2017								0.0006 (J)
3/26/2018								<0.005
3/27/2018	<0.005							
3/28/2018		<0.005	<0.005	<0.005				
3/29/2018					<0.005	<0.005	<0.005	
6/13/2018	0.00068 (J)			<0.005	0.0039 (J)	<0.005		
6/14/2018		<0.005	<0.005					
6/15/2018							<0.005	<0.005
Mean	0.001229	0.00231	0.001891	0.00233	0.00273	0.0024	0.0021	0.00119
Std. Dev.	0.0008841	0.0006008	0.000982	0.0005376	0.0007119	0.0003162	0.0008899	0.0007078
Upper Lim.	0.0025	0.0025	0.0025	0.0025	0.003365	0.0025	0.0025	0.0025
Lower Lim.	0.0005	0.0006	0.0004	0.0008	0.002095	0.0015	0.0003	0.0006

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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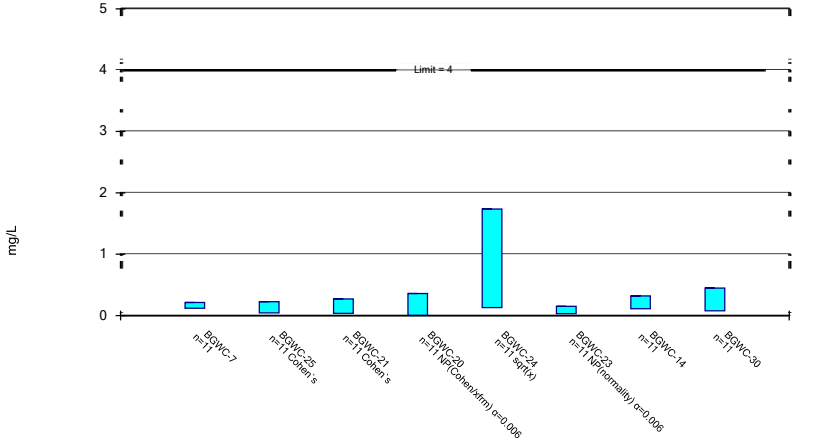
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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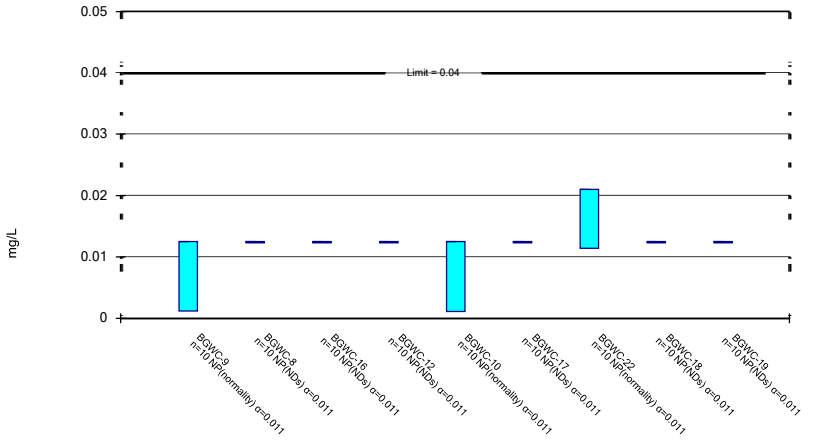
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



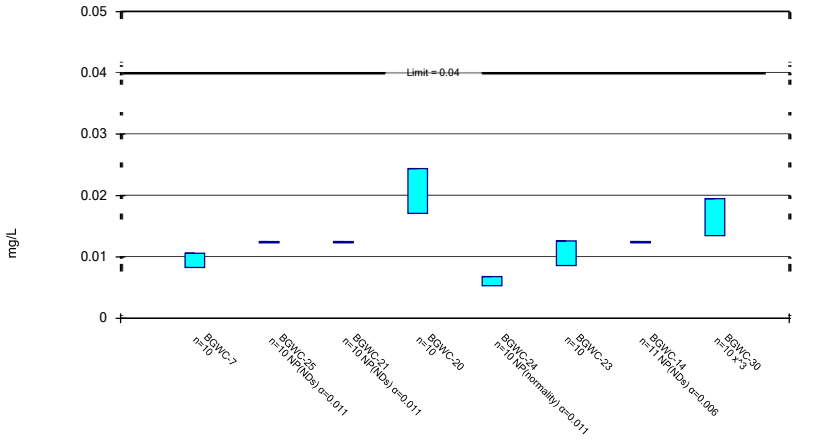
Constituent: Lithium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.12 (J)								
6/7/2016		<0.3	<0.3	<0.3	0.09 (J)	0.15 (J)			
6/8/2016							0.43	0.1 (J)	<0.3
8/10/2016		0.07 (J)							
8/11/2016	0.27 (J)		0.12 (J)			0.3 (J)			
8/12/2016				0.08 (J)				0.39	0.2 (J)
8/16/2016					0.09 (J)				
8/18/2016							0.3 (J)		
10/4/2016		0.07 (J)							
10/5/2016	0.12 (J)								
10/6/2016				0.06 (J)					
10/7/2016			0.08 (J)		0.17 (J)	0.14 (J)		0.16 (J)	0.07 (J)
10/10/2016							0.32		
12/2/2016		0.09 (J)							
12/5/2016	0.26 (J)			0.12 (J)					
12/6/2016			0.24 (J)		0.16 (J)	0.19 (J)		0.32	
12/7/2016									0.09 (J)
12/8/2016							0.26 (J)		
2/14/2017		0.02 (J)							
2/15/2017	0.46			0.33					
2/16/2017			0.31		0.38	0.51		0.38	0.6
2/17/2017							0.39		
4/14/2017		0.02 (J)							
4/17/2017	0.14 (J)								
4/18/2017			0.02 (J)	0.006 (J)	0.12 (J)				
4/19/2017						0.18 (J)		0.08 (J)	0.09 (J)
4/20/2017							0.34		
5/26/2017	0.13 (J)	0.02 (J)							
5/30/2017			0.51			0.15 (J)			
6/1/2017								0.09 (J)	0.05 (J)
6/2/2017				0.04 (J)	0.03 (J)				
6/5/2017							0.29 (J)		
7/10/2017		0.03 (J)							
7/11/2017	0.2 (J)								
7/12/2017					0.15 (J)				
7/13/2017				0.17 (J)					
7/14/2017			0.14 (J)			0.16 (J)		0.06 (J)	0.08 (J)
7/19/2017							0.33		
10/10/2017	0.61	<0.3		0.08 (J)					
10/11/2017			0.29 (J)		0.07 (J)	0.64		0.14 (J)	0.11 (J)
10/12/2017							0.31		
3/26/2018		<0.3							
3/27/2018	0.36		<0.3		<0.3	0.33		<0.3	<0.3
3/28/2018				<0.3					
3/29/2018							0.58		
6/12/2018	0.13 (J)	0.061 (J)	0.061 (J)						
6/14/2018				<0.3	0.046 (J)	0.11 (J)	0.15 (J)	0.095 (J)	
6/15/2018									0.07 (J)
Mean	0.2545	0.07555	0.1883	0.1215	0.1324	0.26	0.3364	0.1786	0.1509
Std. Dev.	0.1623	0.05333	0.1405	0.08688	0.09471	0.172	0.1077	0.1236	0.1554
Upper Lim.	0.3702	0.15	0.3765	0.3192	0.1979	0.371	0.4261	0.2666	0.2
Lower Lim.	0.1293	0.02	0.09604	0.05635	0.0607	0.1337	0.2466	0.08259	0.05

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.19 (J)	0.14 (J)	<0.3	0.09 (J)				
6/9/2016					<0.3	0.12 (J)		
6/10/2016							0.23	
8/11/2016	0.15 (J)							
8/12/2016				0.04 (J)				
8/15/2016		0.08 (J)						
8/17/2016							0.12 (J)	
8/18/2016			0.09 (J)		0.24 (J)	0.08 (J)		
10/6/2016	0.17 (J)							
10/7/2016							0.13 (J)	
10/10/2016		0.1 (J)	0.04 (J)	0.06 (J)	0.3	0.09 (J)		
12/6/2016	0.22 (J)							
12/7/2016				0.07 (J)	0.05 (J)	0.08 (J)		
12/8/2016		0.06 (J)	0.08 (J)				0.31	
1/23/2017								0.06 (J)
2/7/2017								0.09 (J)
2/15/2017	0.18 (J)							
2/17/2017			0.08 (J)	0.06 (J)				
2/20/2017		0.16 (J)			0.65	0.09 (J)		
2/21/2017							0.35	
3/27/2017								0.09 (J)
4/17/2017								0.36
4/18/2017	0.11 (J)							
4/19/2017			0.04 (J)	0.005 (J)	0.21 (J)	0.03 (J)		
4/20/2017		0.02 (J)						
4/21/2017							0.04 (J)	
5/22/2017								0.05 (J)
6/1/2017		0.04 (J)	0.03 (J)	0.65				
6/2/2017	0.07 (J)							
6/5/2017					0.05 (J)	<0.3		0.32
6/6/2017							0.36	
7/11/2017								0.13 (J)
7/14/2017	0.23 (J)							
7/17/2017		0.07 (J)			2.5	0.09 (J)		
7/18/2017			0.08 (J)	0.36				
7/19/2017							0.18 (J)	
8/23/2017								0.17 (J)
10/10/2017								0.35
10/11/2017	0.1 (J)	0.11 (J)		<0.3	1.8	0.09 (J)		
10/12/2017			0.12 (J)				0.08 (J)	
3/26/2018								0.75
3/27/2018	<0.3							
3/28/2018		<0.3	<0.3	<0.3				
3/29/2018					2	<0.3	<0.3	
6/13/2018	0.25 (J)			0.038 (J)	3.1	0.71		
6/14/2018		<0.3	<0.3					
6/15/2018							0.41	0.51
Mean	0.1655	0.09818	0.09182	0.1521	1.005	0.1527	0.2145	0.2618
Std. Dev.	0.05663	0.04813	0.04535	0.1913	1.124	0.1879	0.1253	0.2216
Upper Lim.	0.2126	0.2268	0.2712	0.36	1.737	0.15	0.319	0.4465
Lower Lim.	0.1183	0.04215	0.0351	0.005	0.1303	0.03	0.1101	0.07714

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.025								
6/7/2016		<0.025	<0.025	<0.025	0.0065	<0.025			
6/8/2016							0.012	<0.025	<0.025
8/10/2016		<0.025							
8/11/2016	<0.025		<0.025			<0.025			
8/12/2016				<0.025				<0.025	<0.025
8/16/2016					<0.025				
8/18/2016							0.0118 (J)		
10/4/2016		<0.025							
10/5/2016	<0.025								
10/6/2016				<0.025					
10/7/2016			<0.025		<0.025	<0.025		<0.025	<0.025
10/10/2016							0.0137 (J)		
12/2/2016		<0.025							
12/5/2016	<0.025			<0.025					
12/6/2016			<0.025		<0.025	<0.025		<0.025	
12/7/2016									<0.025
12/8/2016							0.0154 (J)		
2/14/2017		<0.025							
2/15/2017	<0.025			<0.025					
2/16/2017			<0.025		<0.025	<0.025		<0.025	<0.025
2/17/2017							0.0125 (J)		
4/14/2017		<0.025							
4/17/2017	0.0013 (J)								
4/18/2017			<0.025	<0.025	0.0011 (J)				
4/19/2017						<0.025		<0.025	<0.025
4/20/2017							0.012 (J)		
5/26/2017	0.0013 (J)	<0.025							
5/30/2017			<0.025			<0.025			
6/1/2017								<0.025	<0.025
6/2/2017				<0.025	0.0011 (J)				
6/5/2017							0.0114 (J)		
7/10/2017		<0.025							
7/11/2017	<0.025								
7/12/2017					<0.025				
7/13/2017				<0.025					
7/14/2017			<0.025			<0.025		<0.025	<0.025
7/19/2017							0.0126 (J)		
3/26/2018		<0.025							
3/27/2018	0.0014 (J)		<0.025		0.0025 (J)	<0.025		<0.025	<0.025
3/28/2018				<0.025					
3/29/2018							0.021 (J)		
6/12/2018	0.0012 (J)	<0.025	<0.025						
6/14/2018				<0.025	0.0011 (J)	<0.025	0.024 (J)	<0.025	
6/15/2018									<0.025
Mean	0.00802	0.0125	0.0125	0.0125	0.00748	0.0125	0.01464	0.0125	0.0125
Std. Dev.	0.005784	0	0	0	0.005516	0	0.004356	0	0
Upper Lim.	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.021	0.0125	0.0125
Lower Lim.	0.0012	0.0125	0.0125	0.0125	0.0011	0.0125	0.0114	0.0125	0.0125

Confidence Interval

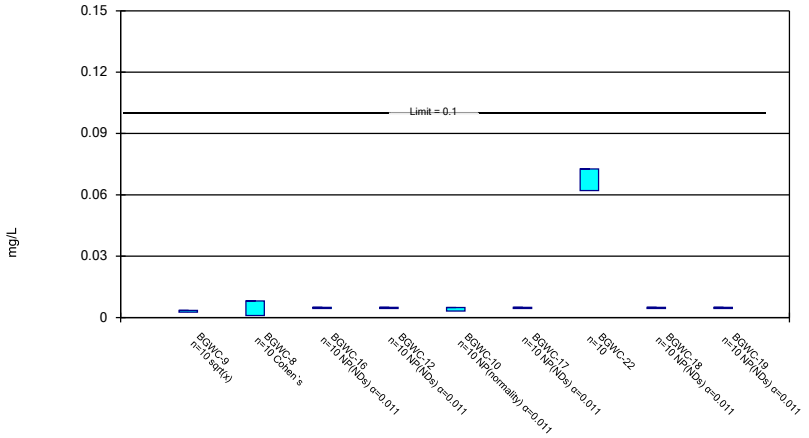
Constituent: Lithium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0079	<0.025	<0.025	0.016				
6/9/2016					0.0057	0.0074		
6/10/2016							<0.025	
8/11/2016	0.0093 (J)							
8/12/2016				0.0202 (J)				
8/15/2016		<0.025						
8/17/2016							<0.025	
8/18/2016			<0.025		0.0061 (J)	0.0078 (J)		
10/6/2016	0.0102 (J)							
10/7/2016							<0.025	
10/10/2016		<0.025	<0.025	0.0194 (J)	0.006 (J)	0.0093 (J)		
12/6/2016	0.0094 (J)							
12/7/2016				0.0265 (J)	0.0066 (J)	0.0117 (J)		
12/8/2016		<0.025	<0.025				<0.025	
1/23/2017								0.0171 (J)
2/7/2017								0.0196 (J)
2/15/2017	<0.025							
2/17/2017			<0.025	0.0253 (J)				
2/20/2017		<0.025			0.0053 (J)	0.011 (J)		
2/21/2017							<0.025	
3/27/2017								0.0192 (J)
4/17/2017								0.0169 (J)
4/18/2017	0.0086 (J)							
4/19/2017			<0.025	0.0233 (J)	0.0055 (J)	0.0105 (J)		
4/20/2017		<0.025						
4/21/2017							<0.025	
5/22/2017								0.0167 (J)
6/1/2017		<0.025	<0.025	0.023 (J)				
6/2/2017	0.0102 (J)							
6/5/2017					0.0068 (J)	0.0108 (J)		0.0177 (J)
6/6/2017							<0.025	
6/15/2017							<0.025	
7/11/2017								0.0203 (J)
7/14/2017	0.0092 (J)							
7/17/2017		<0.025			<0.025	0.0095 (J)		
7/18/2017			<0.025	0.0207 (J)				
7/19/2017							<0.025	
8/23/2017								0.0182 (J)
3/26/2018								0.0063 (J)
3/27/2018	0.0087 (J)							
3/28/2018		<0.025	<0.025	0.013 (J)				
3/29/2018					0.0053 (J)	0.014 (J)	<0.025	
6/13/2018	0.0084 (J)			0.02 (J)	0.0067 (J)	0.014 (J)		
6/14/2018		<0.025	<0.025					
6/15/2018							<0.025	0.0049 (J)
Mean	0.00944	0.0125	0.0125	0.02074	0.00665	0.0106	0.0125	0.01569
Std. Dev.	0.001304	0	0	0.004091	0.00213	0.002249	0	0.00546
Upper Lim.	0.0106	0.0125	0.0125	0.02439	0.0068	0.01261	0.0125	0.01951
Lower Lim.	0.008277	0.0125	0.0125	0.01709	0.0053	0.008593	0.0125	0.01349

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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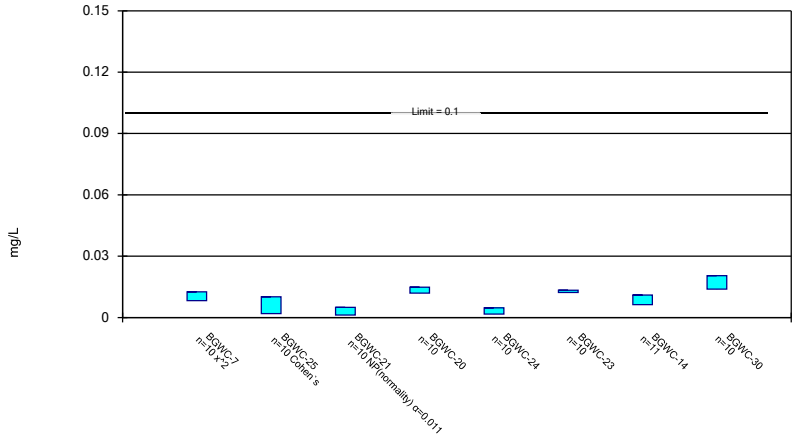
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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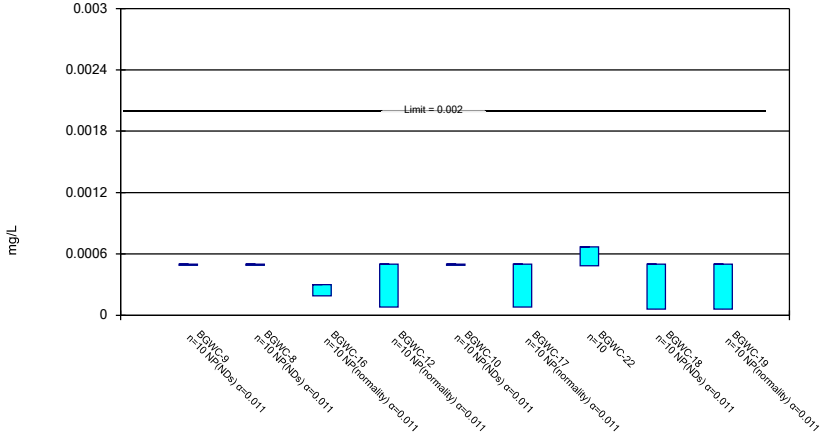
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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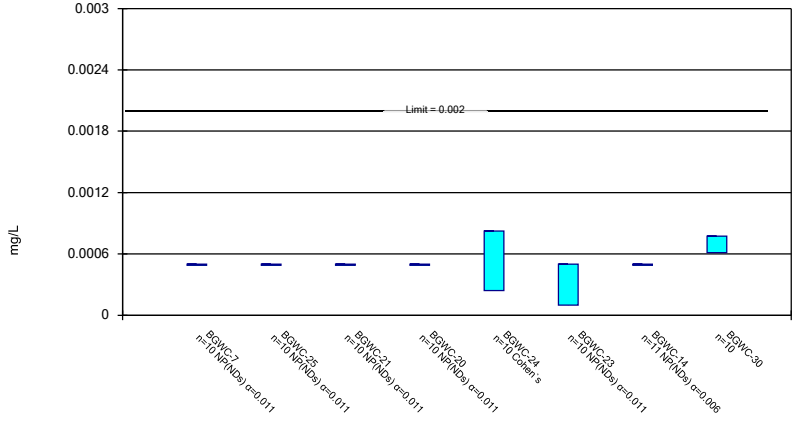
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.0028 (J)								
6/7/2016		0.00063 (J)	<0.01	<0.01	0.0067 (J)	<0.01			
6/8/2016							0.07	<0.01	<0.01
8/10/2016		0.0039 (J)							
8/11/2016	0.003 (J)		<0.01			<0.01			
8/12/2016				<0.01				<0.01	<0.01
8/16/2016					0.0032 (J)				
8/18/2016							0.0758		
10/4/2016		0.0052 (J)							
10/5/2016	0.0032 (J)								
10/6/2016				<0.01					
10/7/2016			<0.01		0.0032 (J)	<0.01		<0.01	<0.01
10/10/2016							0.0712		
12/2/2016		<0.01							
12/5/2016	0.0033 (J)			<0.01					
12/6/2016			<0.01		0.0049 (J)	<0.01		<0.01	
12/7/2016									<0.01
12/8/2016							0.0682		
2/14/2017		0.0044 (J)							
2/15/2017	0.0027 (J)			<0.01					
2/16/2017			<0.01		0.0039 (J)	<0.01		<0.01	<0.01
2/17/2017							0.066		
4/14/2017		0.0013 (J)							
4/17/2017	0.0025 (J)								
4/18/2017			<0.01	<0.01	0.0032 (J)				
4/19/2017						<0.01		<0.01	<0.01
4/20/2017							0.0662		
5/26/2017	0.0029 (J)	0.0024 (J)							
5/30/2017			<0.01			<0.01			
6/1/2017								<0.01	<0.01
6/2/2017				<0.01	0.0035 (J)				
6/5/2017							0.071		
7/10/2017		0.0013 (J)							
7/11/2017	0.0029 (J)								
7/12/2017					0.0037 (J)				
7/13/2017				<0.01					
7/14/2017			<0.01			<0.01		<0.01	<0.01
7/19/2017							0.0703		
3/26/2018		<0.01							
3/27/2018	0.0031 (J)		<0.01		0.0032 (J)	<0.01		<0.01	<0.01
3/28/2018				<0.01					
3/29/2018							0.056		
6/12/2018	0.0043 (J)	0.0026 (J)	<0.01						
6/14/2018				<0.01	0.0033 (J)	<0.01	0.059	<0.01	
6/15/2018									<0.01
Mean	0.00307	0.003173	0.005	0.005	0.00388	0.005	0.06737	0.005	0.005
Std. Dev.	0.0004923	0.001739	0	0	0.001123	0	0.005941	0	0
Upper Lim.	0.003486	0.008107	0.005	0.005	0.0049	0.005	0.07267	0.005	0.005
Lower Lim.	0.002651	0.0009733	0.005	0.005	0.0032	0.005	0.06207	0.005	0.005

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0088 (J)	0.0064 (J)	0.0027 (J)	0.011 (J)				
6/9/2016					0.0024 (J)	0.013 (J)		
6/10/2016							0.014 (J)	
8/11/2016	0.01							
8/12/2016				0.0127				
8/15/2016		0.0039 (J)						
8/17/2016							0.0085 (J)	
8/18/2016			0.0023 (J)		0.0034 (J)	0.0136		
10/6/2016	0.0117							
10/7/2016							0.0072 (J)	
10/10/2016		0.0029 (J)	0.0025 (J)	0.0136	0.0047 (J)	0.0134		
12/6/2016	0.0102							
12/7/2016				0.0139	0.0066 (J)	0.0128		
12/8/2016		<0.01	<0.01				0.0082 (J)	
1/23/2017								0.0125
2/7/2017								0.0163
2/15/2017	0.0018 (J)							
2/17/2017			<0.01	0.0148				
2/20/2017		0.0024 (J)			0.0026 (J)	0.0122		
2/21/2017							0.0076 (J)	
3/27/2017								0.0157
4/17/2017								0.0178
4/18/2017	0.0103							
4/19/2017			0.0014 (J)	0.012	0.002 (J)	0.0124		
4/20/2017		0.0019 (J)						
4/21/2017							0.0052 (J)	
5/22/2017								0.0208
6/1/2017		0.0026 (J)	0.0012 (J)	0.0125				
6/2/2017	0.0129							
6/5/2017					0.0015 (J)	0.0115		0.0191
6/6/2017							0.0079 (J)	
6/15/2017							0.0052 (J)	
7/11/2017								0.0218
7/14/2017	0.0129							
7/17/2017		0.0024 (J)			0.0013 (J)	0.0131		
7/18/2017			0.0013 (J)	0.0155				
7/19/2017							0.0073 (J)	
8/23/2017								0.0218
3/26/2018								0.014
3/27/2018	0.01							
3/28/2018		<0.01	<0.01	0.012				
3/29/2018					0.0027 (J)	0.013	0.012	
6/13/2018	0.013			0.016	<0.01	0.013		
6/14/2018		<0.01	<0.01					
6/15/2018							0.012	0.012
Mean	0.01016	0.00375	0.00314	0.0134	0.00322	0.0128	0.008645	0.01718
Std. Dev.	0.003287	0.001522	0.001677	0.001647	0.001709	0.0006164	0.002841	0.003677
Upper Lim.	0.01258	0.01014	0.005	0.01487	0.004745	0.01335	0.01101	0.02046
Lower Lim.	0.008226	0.001892	0.0012	0.01193	0.001695	0.01225	0.006278	0.0139

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.001								
6/7/2016		<0.001	0.0002 (J)	<0.001	<0.001	8.5E-05 (J)			
6/8/2016							0.00035 (J)	<0.001	8.5E-05 (J)
8/10/2016		<0.001							
8/11/2016	<0.001		0.0002 (J)			8E-05 (J)			
8/12/2016				9E-05 (J)				6E-05 (J)	8E-05 (J)
8/16/2016					<0.001				
8/18/2016							0.0005 (J)		
10/4/2016		<0.001							
10/5/2016	<0.001								
10/6/2016				<0.001					
10/7/2016			0.0002 (J)		<0.001	<0.001		<0.001	<0.001
10/10/2016							0.0006 (J)		
12/2/2016		<0.001							
12/5/2016	<0.001			<0.001					
12/6/2016			0.0003 (J)		<0.001	<0.001		<0.001	
12/7/2016									<0.001
12/8/2016							0.0005 (J)		
2/14/2017		<0.001							
2/15/2017	<0.001			<0.001					
2/16/2017			0.0003 (J)		<0.001	<0.001		<0.001	<0.001
2/17/2017							0.0006 (J)		
4/14/2017		<0.001							
4/17/2017	<0.001								
4/18/2017			0.0002 (J)	9E-05 (J)	<0.001				
4/19/2017						8E-05 (J)		<0.001	6E-05 (J)
4/20/2017							0.0006 (J)		
5/26/2017	<0.001	<0.001							
5/30/2017			0.0002 (J)			9E-05 (J)			
6/1/2017								<0.001	8E-05 (J)
6/2/2017				<0.001	<0.001				
6/5/2017							0.0006 (J)		
7/10/2017		<0.001							
7/11/2017	<0.001								
7/12/2017					<0.001				
7/13/2017				8E-05 (J)					
7/14/2017			0.0002 (J)			9E-05 (J)		<0.001	8E-05 (J)
7/19/2017							0.0007 (J)		
3/26/2018		<0.001							
3/27/2018	<0.001		0.00019 (J)		<0.001	<0.001		<0.001	<0.001
3/28/2018				<0.001					
3/29/2018							0.00063 (J)		
6/12/2018	<0.001	<0.001	0.0002 (J)						
6/14/2018				<0.001	<0.001	<0.001	0.00069 (J)	<0.001	
6/15/2018									<0.001
Mean	0.0005	0.0005	0.000219	0.000376	0.0005	0.0002925	0.000577	0.000456	0.0002885
Std. Dev.	0	0	4.28E-05	0.0001997	0	0.0002187	0.0001034	0.0001391	0.000223
Upper Lim.	0.0005	0.0005	0.0003	0.0005	0.0005	0.0005	0.0006692	0.0005	0.0005
Lower Lim.	0.0005	0.0005	0.00019	8E-05	0.0005	8E-05	0.0004848	6E-05	6E-05

Confidence Interval

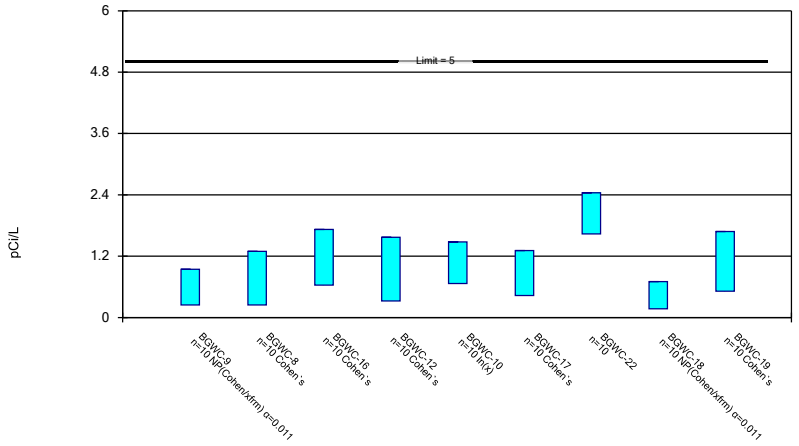
Constituent: Thallium (mg/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	<0.001	<0.001	<0.001	<0.001				
6/9/2016					0.00022 (J)	0.0001 (J)		
6/10/2016							<0.001	
8/11/2016	<0.001							
8/12/2016				<0.001				
8/15/2016		<0.001						
8/17/2016							<0.001	
8/18/2016			<0.001		<0.001	<0.001		
10/6/2016	<0.001							
10/7/2016							<0.001	
10/10/2016		<0.001	<0.001	<0.001	0.0003 (J)	<0.001		
12/6/2016	<0.001							
12/7/2016				<0.001	<0.001	<0.001		
12/8/2016		<0.001	<0.001				<0.001	
1/23/2017								0.0008 (J)
2/7/2017								0.0008 (J)
2/15/2017	<0.001							
2/17/2017			<0.001	<0.001				
2/20/2017		<0.001			0.0003 (J)	<0.001		
2/21/2017							<0.001	
3/27/2017								0.0006 (J)
4/17/2017								0.0007 (J)
4/18/2017	<0.001							
4/19/2017			<0.001	<0.001	0.0004 (J)	<0.001		
4/20/2017		<0.001						
4/21/2017							<0.001	
5/22/2017								0.0008 (J)
6/1/2017		<0.001	<0.001	<0.001				
6/2/2017	<0.001							
6/5/2017					0.0004 (J)	<0.001		0.0007 (J)
6/6/2017							<0.001	
6/15/2017							<0.001	
7/11/2017								0.0007 (J)
7/14/2017	<0.001							
7/17/2017		<0.001			0.0004 (J)	<0.001		
7/18/2017			<0.001	<0.001				
7/19/2017							<0.001	
8/23/2017								0.0007 (J)
3/26/2018								0.00058 (J)
3/27/2018	<0.001							
3/28/2018		<0.001	<0.001	<0.001				
3/29/2018					0.00048 (J)	<0.001	<0.001	
6/13/2018	<0.001			<0.001	0.00053 (J)	<0.001		
6/14/2018		<0.001	<0.001					
6/15/2018							<0.001	0.00056 (J)
Mean	0.0005	0.0005	0.0005	0.0005	0.000403	0.00046	0.0005	0.000694
Std. Dev.	0	0	0	0	0.0001031	0.0001265	0	9.046E-05
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0008228	0.0005	0.0005	0.0007747
Lower Lim.	0.0005	0.0005	0.0005	0.0005	0.0002423	0.0001	0.0005	0.0006133

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Radium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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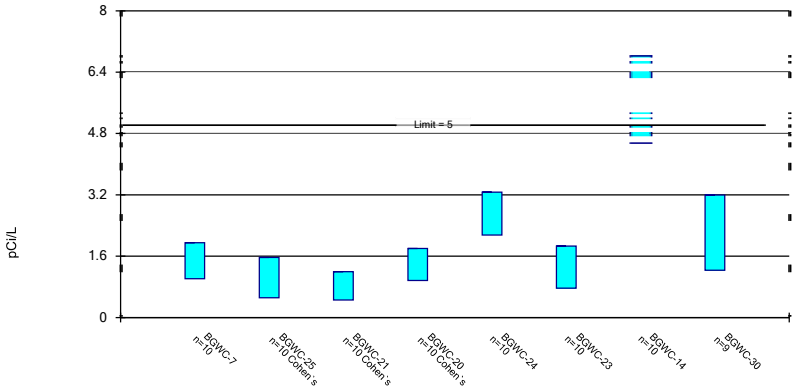
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Radium Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.488								
6/7/2016		<1.24	<1.24	<1.24	0.616	<1.24			
6/8/2016							1.53	0.406	<1.24
8/10/2016		0.862							
8/11/2016	0.639		1.71			0.808			
8/12/2016				0.849				1.39	1.18
8/16/2016					1.08				
8/18/2016							2.47		
10/4/2016		0.48							
10/5/2016	0.945								
10/6/2016				1.57					
10/7/2016			0.485		2.82	0.874		0.451	1.97
10/10/2016							2.11		
12/2/2016		0.219							
12/5/2016	2.2			0.956					
12/6/2016			1.22		0.719	0.131		0.516	
12/7/2016									1.31
12/8/2016							2.64		
2/14/2017		0.636							
2/15/2017	0.74			0.229					
2/16/2017			0.19		0.966	0.471		0.172	0.35
2/17/2017							1.34		
4/14/2017		0.13							
4/17/2017	0.764								
4/18/2017			0.52	0.0114	1.01				
4/19/2017						0.65		0.704	0.974
4/20/2017							2.35		
5/26/2017	0.245	0.349							
5/30/2017			1.21			0.65			
6/1/2017								0.493	0.332
6/2/2017				0.375	1.13				
6/5/2017							1.6		
7/10/2017		<1.24							
7/11/2017	<1.24								
7/12/2017					1.29				
7/13/2017				<1.24					
7/14/2017			<1.24			<1.24		<1.24	1.27
7/19/2017							1.76		
3/26/2018		0.303							
3/27/2018	0.745		1.34		0.779	0.551		0.569	0.169
3/28/2018				0.36					
3/29/2018							2.43		
6/12/2018	<1.24	<1.24	<1.24						
6/14/2018				<1.24	<1.24	<1.24	2.14	<1.24	
6/15/2018									<1.24
Mean	0.8006	0.4839	0.8535	0.621	1.103	0.5995	2.037	0.5941	0.8795
Std. Dev.	0.5255	0.228	0.481	0.437	0.6442	0.201	0.4509	0.3159	0.5623
Upper Lim.	0.945	1.294	1.724	1.568	1.478	1.31	2.439	0.704	1.682
Lower Lim.	0.245	0.2457	0.6345	0.3231	0.6662	0.4318	1.635	0.172	0.5145

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 10/15/2018 10:22 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.854	<1.24	0.573	<1.24				
6/9/2016					2.13	0.704		
8/11/2016	1.24							
8/12/2016				1.74				
8/15/2016		1.2						
8/17/2016							5.18	
8/18/2016			0.44		2.67	1.88		
10/6/2016	2.43							
10/10/2016		1.03	0.933	0.944	3.46	1.48		
12/6/2016	0.958							
12/7/2016				2.29	1.65	2.61		
12/8/2016		1.47	1.02					
1/23/2017								2.71
2/7/2017								3
2/15/2017	1.18							
2/17/2017			0.193	1.35				
2/20/2017		0.547			2.68	0.884		
2/21/2017							5.1	
4/17/2017								2.73
4/18/2017	1.26							
4/19/2017			0.488	1.48	3.81	0.948		
4/20/2017		0.0595						
5/22/2017								3.15 (D)
5/26/2017							7.14	
6/1/2017		0.67	0.837	1.61				
6/2/2017	1.24							
6/5/2017					2.86	1.33		0.86
6/6/2017							4.68	
6/15/2017							5.69	
7/11/2017								1.87
7/12/2017							2.92	
7/14/2017	1.55							
7/17/2017		<1.24			2.87	1.04		
7/18/2017			<1.24					
7/19/2017				1.626				
8/10/2017							6.51	
8/23/2017								3.39
8/25/2017							7.04	
3/26/2018								1.61
3/27/2018	2.15							
3/28/2018		0.507	0.864	0.97				
3/29/2018					2.79	1.65	6.35	
6/13/2018	1.95			<1.24	2.19	<1.24		
6/14/2018		<1.24	<1.24					
6/15/2018							6.2	<1.24
Mean	1.481	0.7344	0.6588	1.325	2.711	1.315	5.681	2.216
Std. Dev.	0.5265	0.3987	0.2547	0.5339	0.6289	0.6136	1.273	1.015
Upper Lim.	1.951	1.568	1.198	1.802	3.272	1.862	6.817	3.196
Lower Lim.	1.011	0.5161	0.4553	0.9656	2.15	0.7671	4.545	1.235

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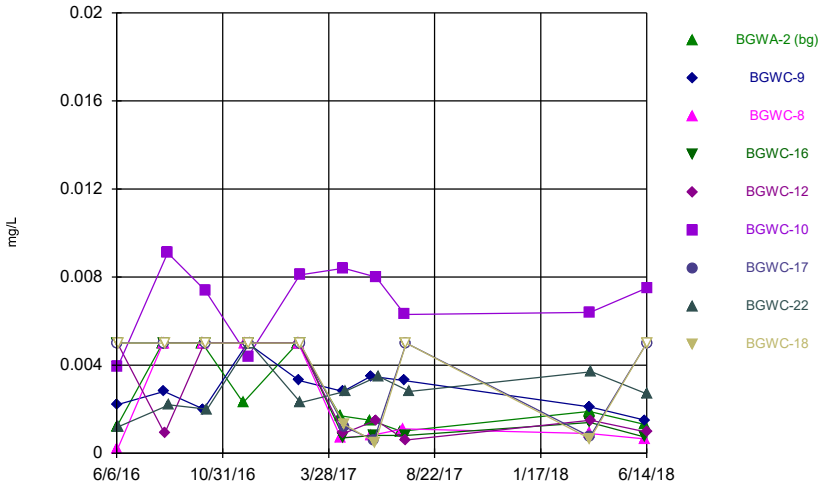
Time Series



Constituent: Arsenic Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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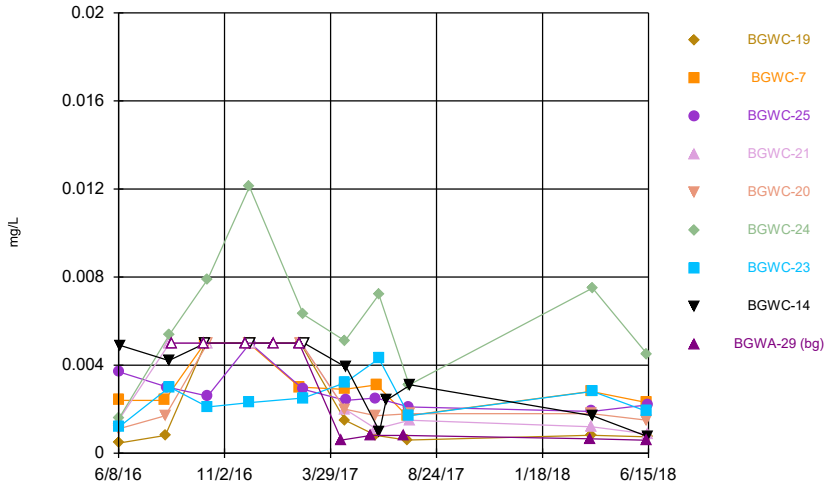
Time Series



Constituent: Arsenic Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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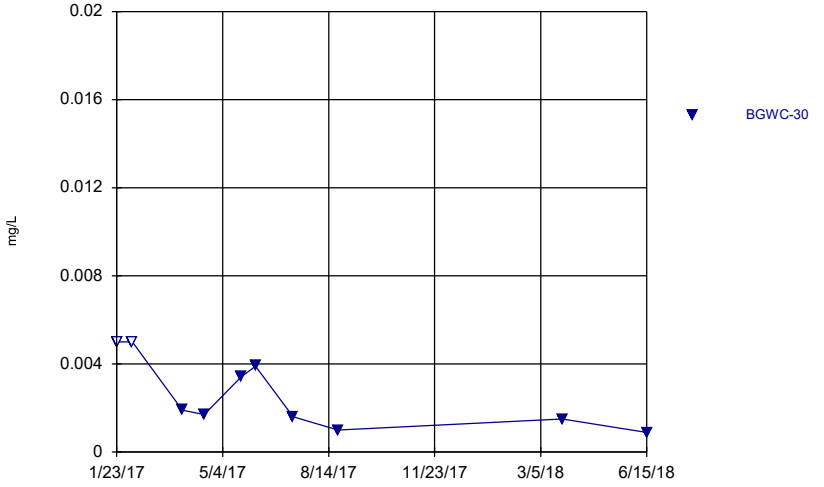
Time Series



Constituent: Arsenic Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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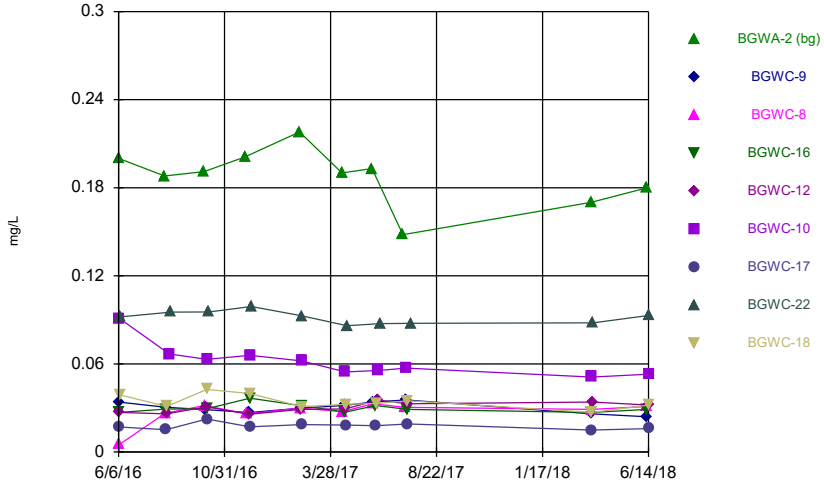
Time Series



Constituent: Barium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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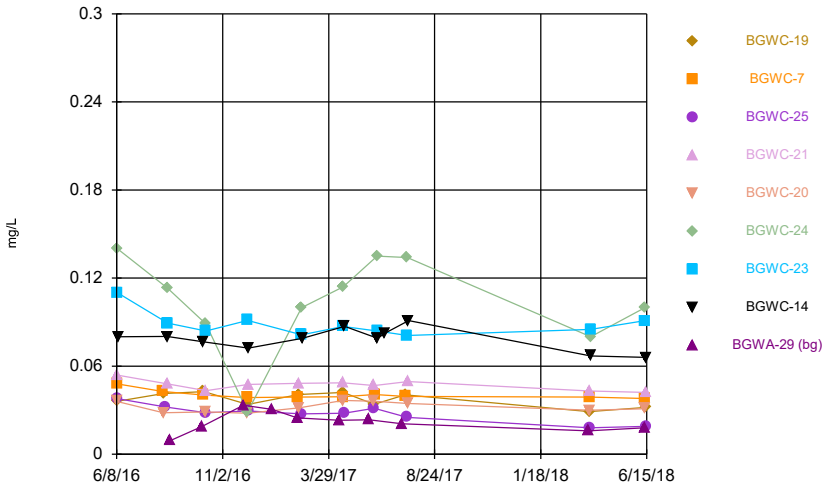
Time Series



Constituent: Barium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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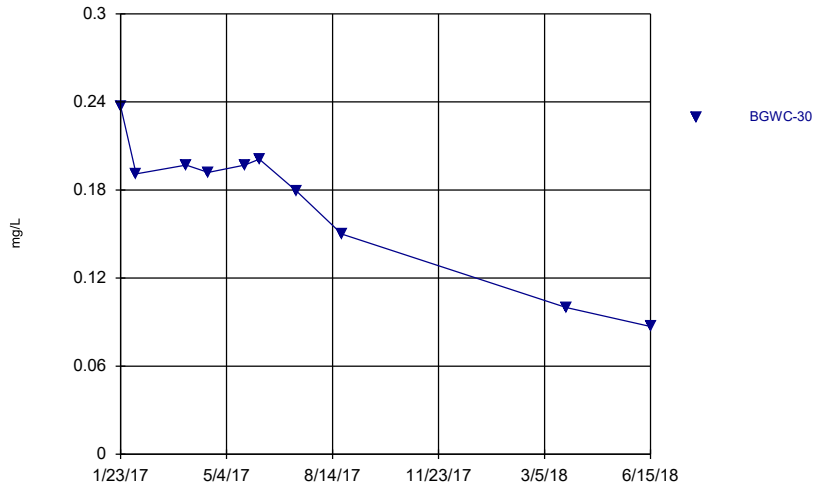
Time Series



Constituent: Barium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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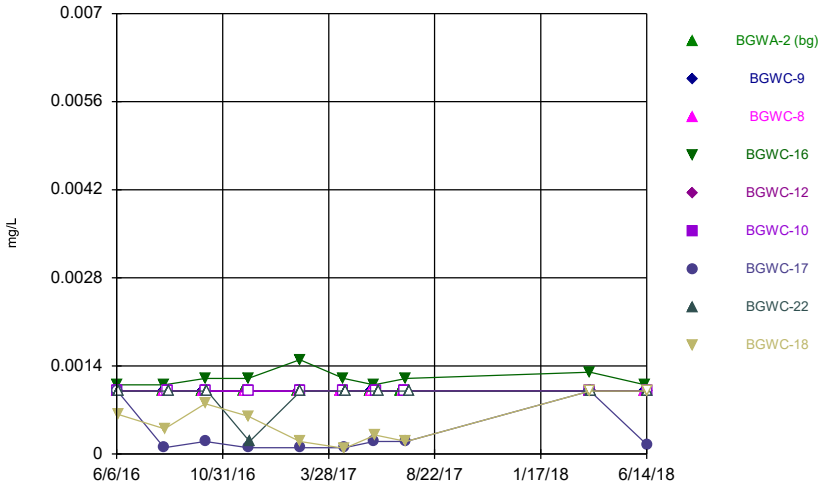
Time Series



Constituent: Cadmium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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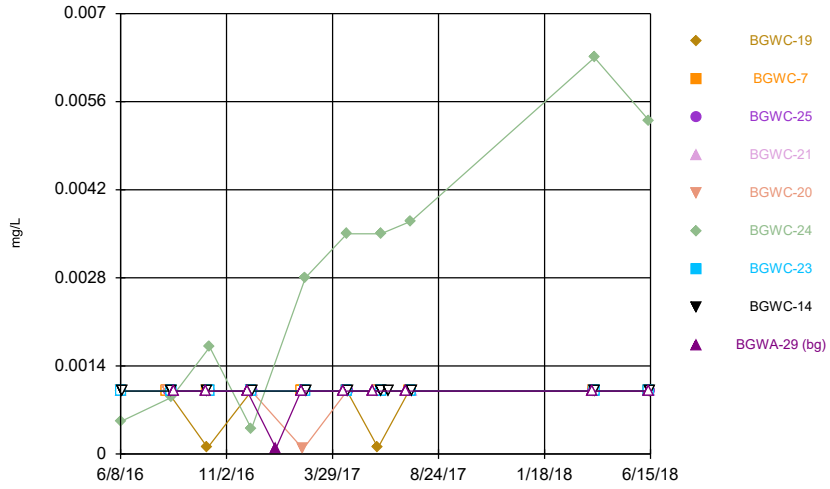
Time Series



Constituent: Cadmium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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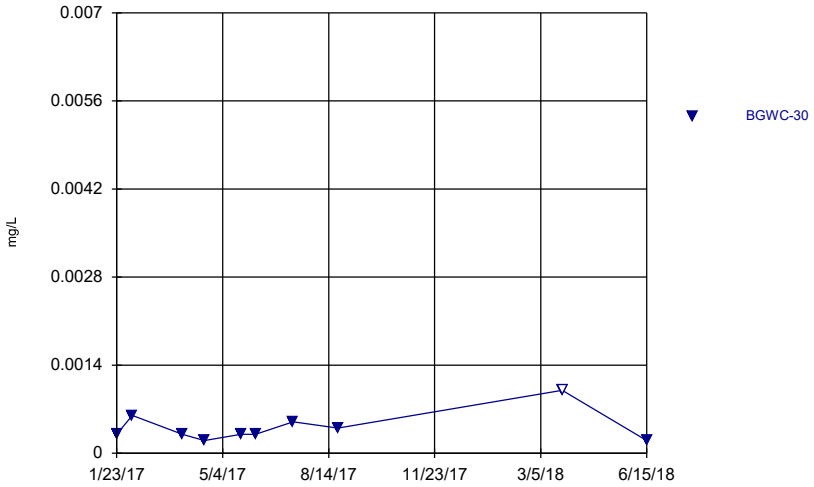
Time Series



Constituent: Cadmium Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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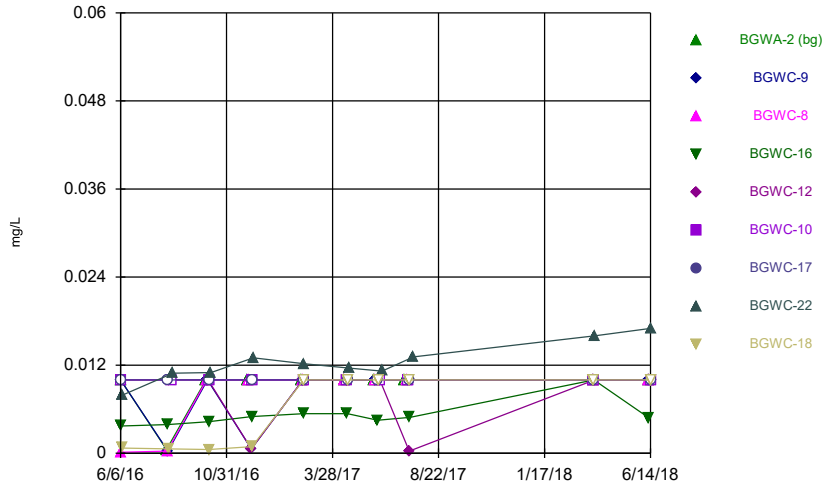
Time Series



Constituent: Cobalt Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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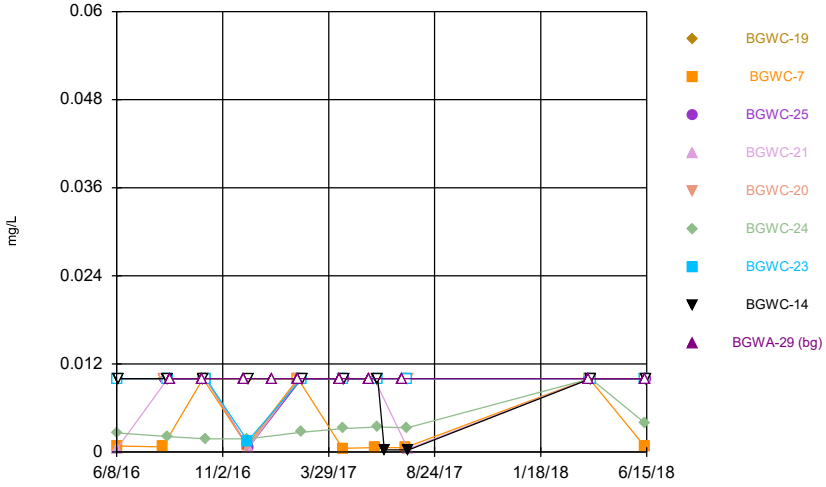
Time Series



Constituent: Cobalt Analysis Run 10/15/2018 10:00 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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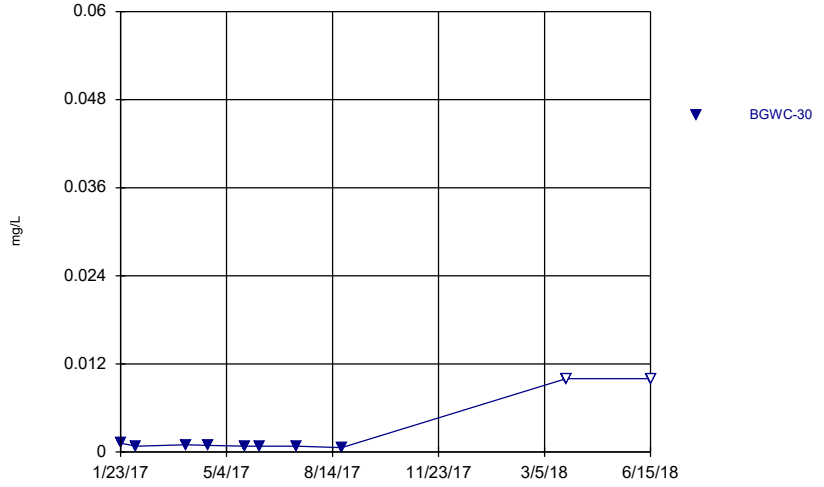
Time Series



Constituent: Cobalt Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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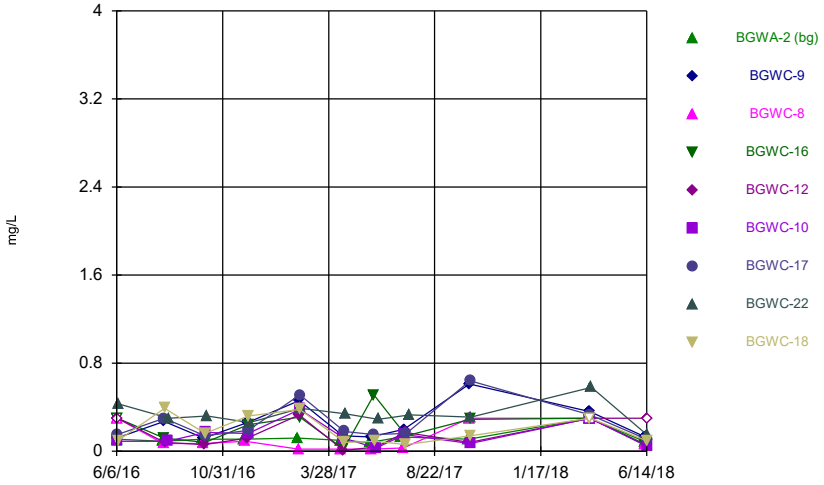
Time Series



Constituent: Fluoride Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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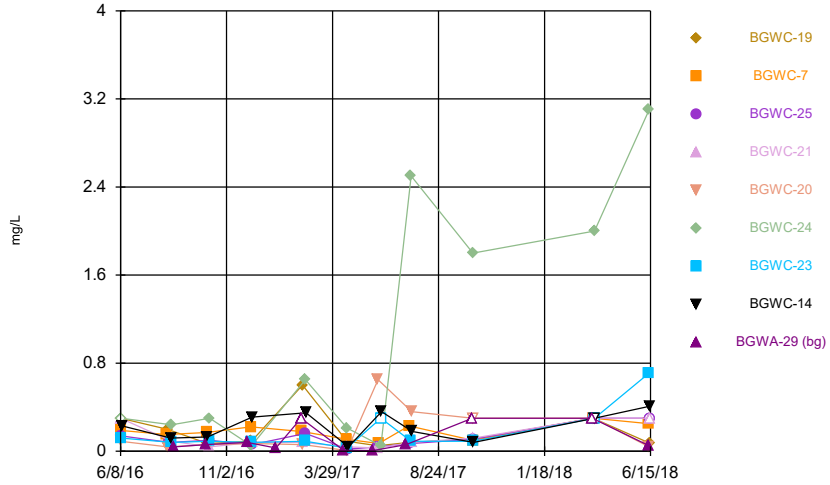
Time Series



Constituent: Fluoride Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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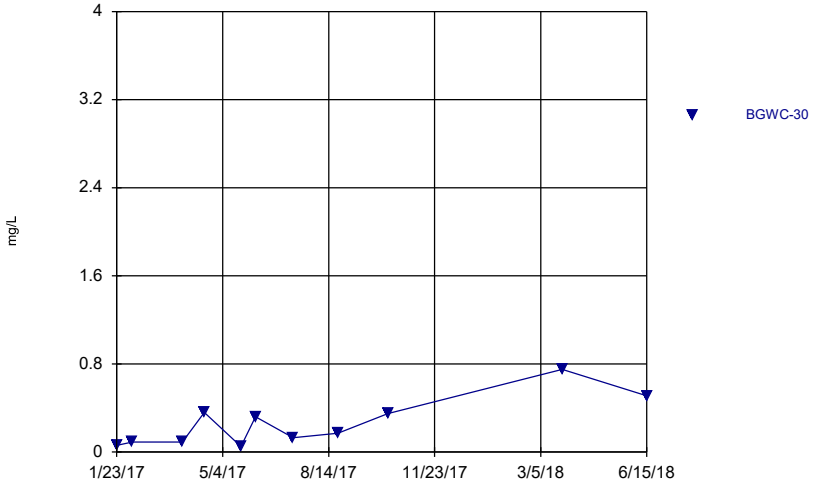
Time Series



Constituent: Fluoride Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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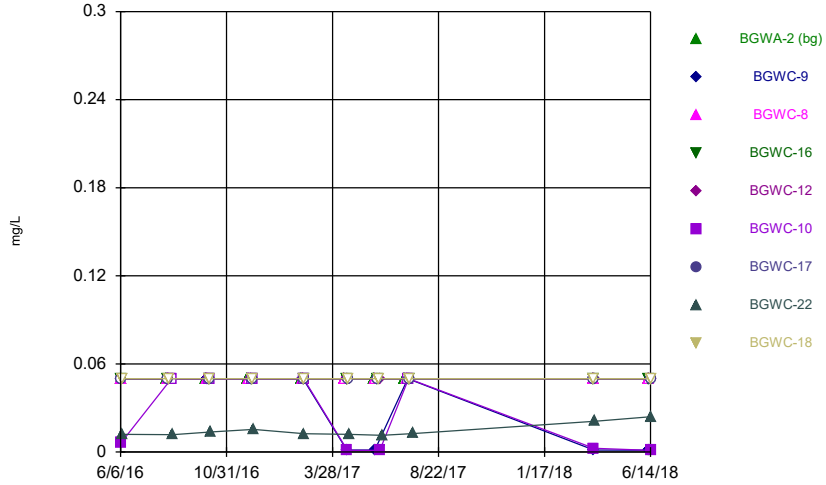
Time Series



Constituent: Lithium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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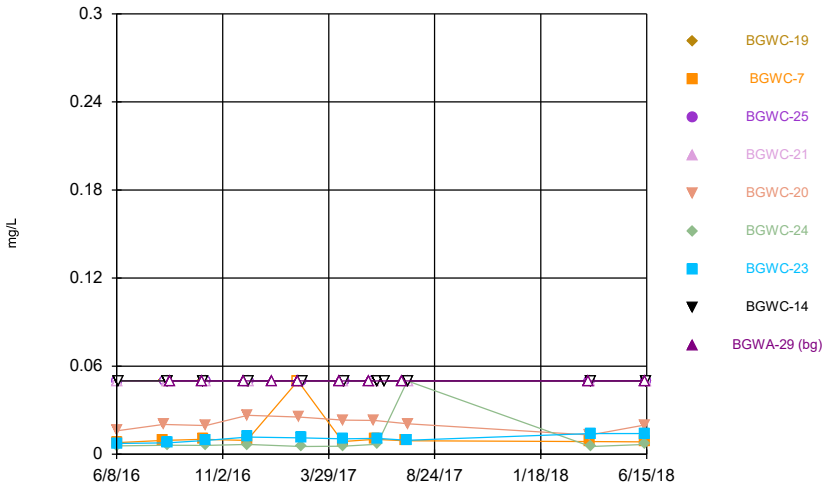
Time Series



Constituent: Lithium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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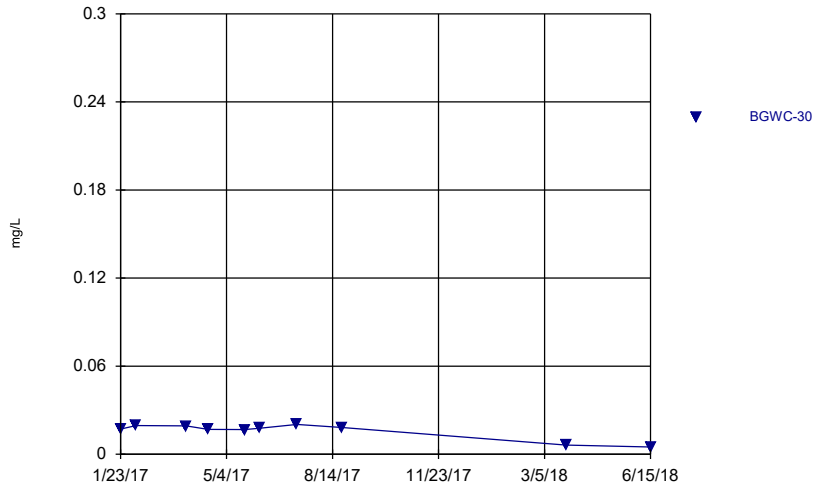
Time Series



Constituent: Lithium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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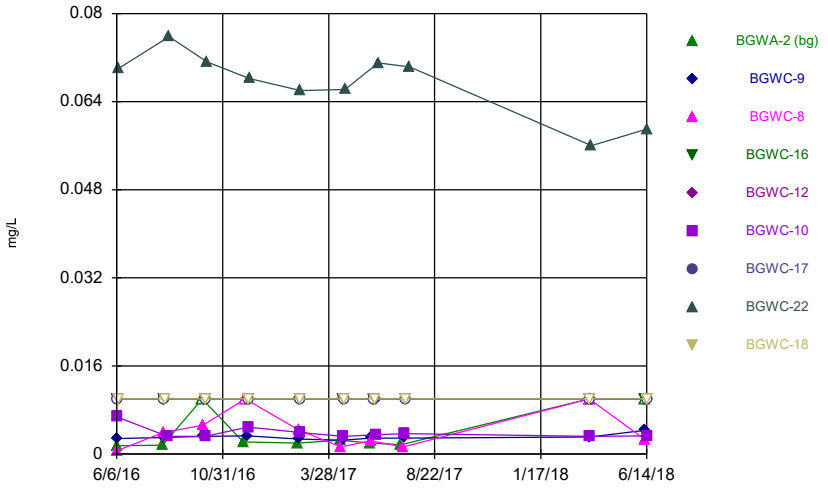
Time Series



Constituent: Molybdenum Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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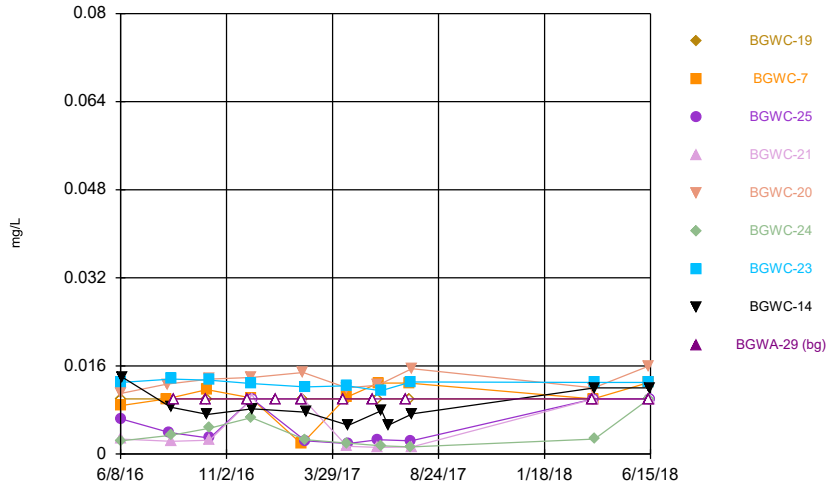
Time Series

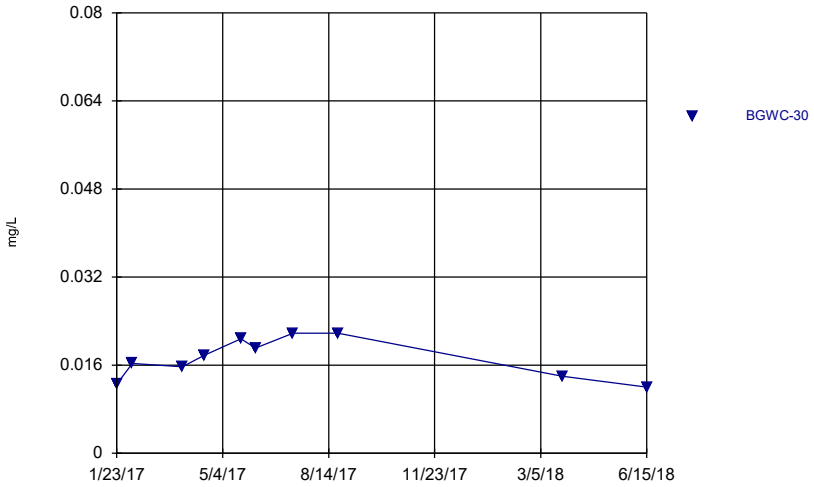


Constituent: Molybdenum Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series



Constituent: Molybdenum Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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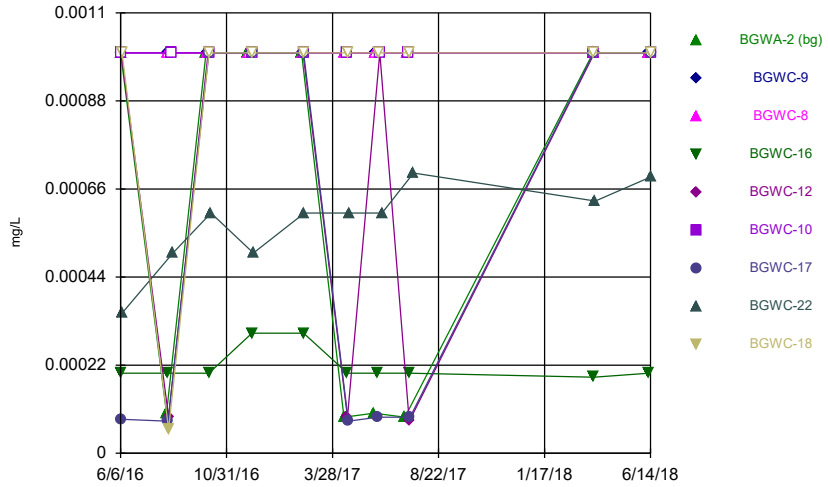
Time Series



Constituent: Thallium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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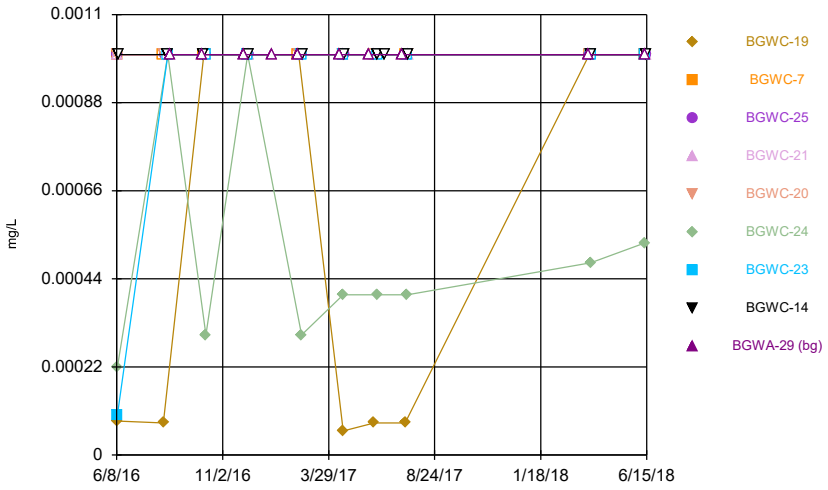
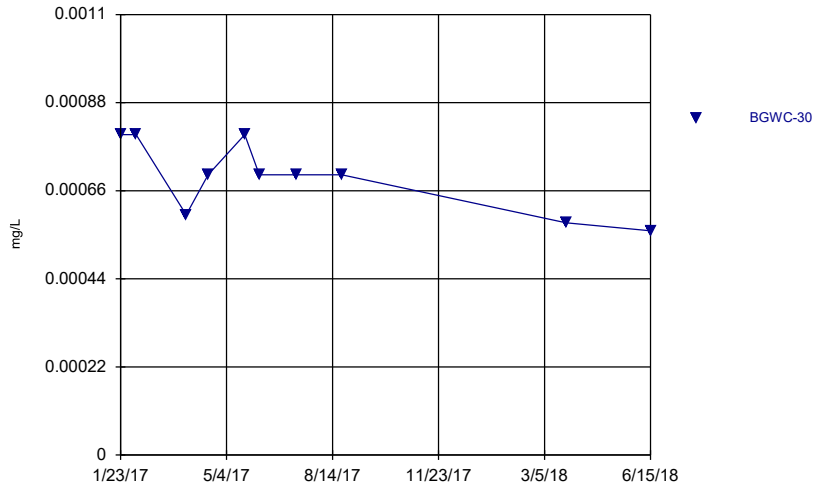


Constituent: Thallium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

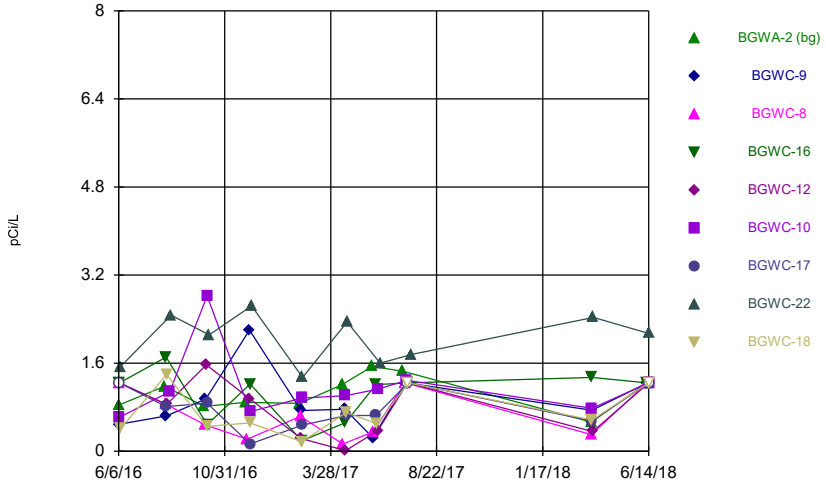


Constituent: Thallium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

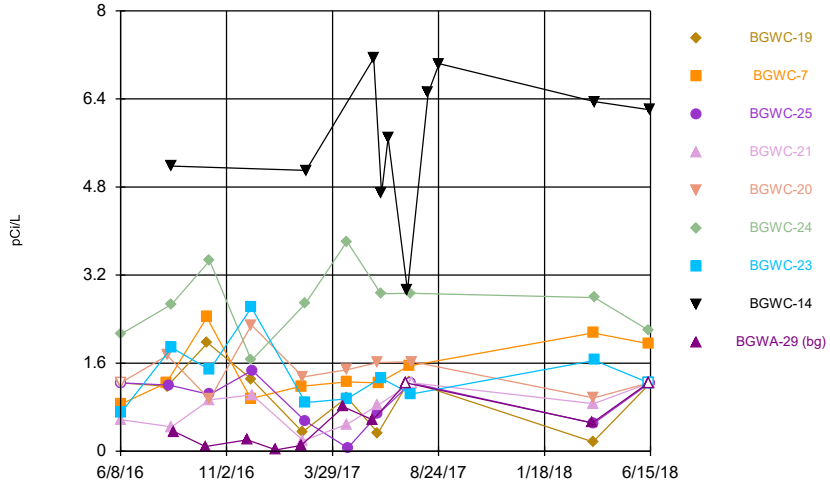


Constituent: Total Radium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

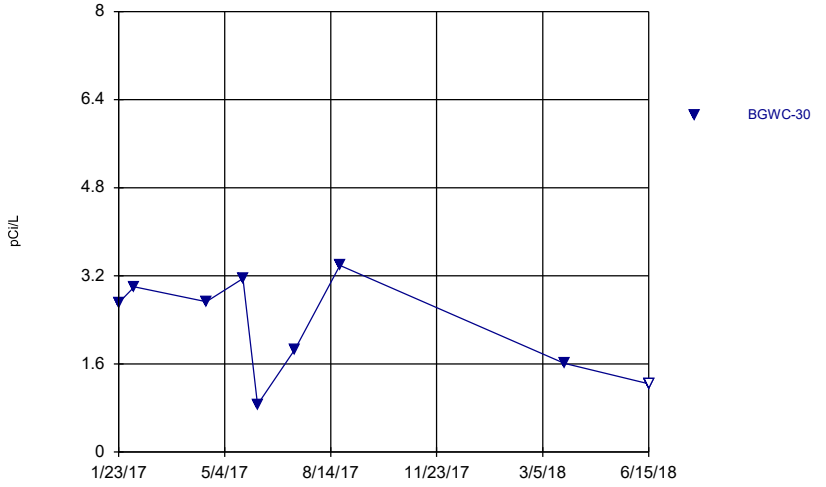


Constituent: Total Radium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



Constituent: Total Radium Analysis Run 10/15/2018 10:01 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

October 2018 event (AM 02)

EPD Based Groundwater Protection Standards Statistical Analysis Package

AM 02

Table B-2
EPD Based Groundwater Protection Standards
Plant Bowen - Ash Pond 1
Bartow County, Georgia
AM 02

Constituent	CAS	Units	EPA MCL	Statistically Derived Upper Tolerance Limits for Background	GWPS[1]
Antimony	7440-36-0	mg/L	0.006	0.003	0.006
Arsenic	7440-38-2	mg/L	0.01	0.005	0.01
Barium	7440-39-3	mg/L	2	0.218	2
Beryllium	7440-41-7	mg/L	0.004	0.003	0.004
Cadmium	7440-43-9	mg/L	0.005	0.001	0.005
Chromium (III+VI)	7440-47-3	mg/L	0.1	0.01	0.1
Cobalt[2]	7440-48-4	mg/L	N/A	0.01	0.01
Fluoride	16984-48-8	mg/L	4	0.191	4
Lead[2]	7439-92-1	mg/L	N/A	0.005	0.005
Lithium[2]	7439-93-2	mg/L	N/A	0.05	0.05
Mercury	7439-97-6	mg/L	0.002	0.0005	0.002
Molybdenum[2]	7439-98-7	mg/L	N/A	0.01	0.01
Selenium	7782-49-2	mg/L	0.05	0.01	0.05
Thallium	7440-28-0	mg/L	0.002	0.001	0.002
Total Radium	7440-14-4	pCi/L	5	1.675	5

Notes:

- = Not applicable

EPA MCL - U.S. Environmental Protection Agency, Maximum Contaminant Level

GWPS - Groundwater Protection Standards

mg/L - milligram per liter

N/A - Not Available

pCi/L - Picocuries per liter

[1]GWPS selected as the greater value between the EPA MCL and the background Upper Tolerance Limit.

[2]Constituent without established EPA MCL.

Tolerance Limit

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:50 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	22	40.91	n/a	0.3235	NP Inter(normal...
Barium (mg/L)	n/a	0.218	n/a	n/a	n/a	22	0	n/a	0.3235	NP Inter(normal...
Beryllium (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	22	95.45	n/a	0.3235	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	66.67	n/a	0.3972	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.01	n/a	n/a	n/a	22	95.45	n/a	0.3235	NP Inter(NDs)
Fluoride (mg/L)	n/a	0.191	n/a	n/a	n/a	24	20.83	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.005	n/a	n/a	n/a	18	88.89	n/a	0.3972	NP Inter(NDs)
Lithium (mg/L)	n/a	0.05	n/a	n/a	n/a	22	100	n/a	0.3235	NP Inter(NDs)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	22	68.18	n/a	0.3235	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	22	81.82	n/a	0.3235	NP Inter(NDs)
Total Radium (pCi/L)	n/a	1.675	n/a	n/a	n/a	22	22.73	No	0.05	Inter

Summary of Confidence Intervals - Significant Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 5:07 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**BGWC-22**	**0.01617**	**0.01018**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-22**	**0.07188**	**0.06061**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-20**	**0.01467**	**0.01206**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-23**	**0.01331**	**0.01233**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**BGWC-30**	**0.01995**	**0.01311**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 5:07 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	BGWC-9	0.003247	0.002117	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.0009494	0.0004503	0.01	No	11	36.36	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-16	0.0025	0.0007	0.01	No	11	54.55	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-12	0.001148	0.0006265	0.01	No	11	45.45	No	0.01	Param.
Arsenic (mg/L)	BGWC-10	0.008218	0.005437	0.01	No	11	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-17	0.0025	0.0006	0.01	No	11	72.73	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-22	0.003102	0.001862	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	BGWC-18	0.0025	0.0005	0.01	No	11	72.73	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.001019	0.0005414	0.01	No	11	36.36	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-7	0.002874	0.001911	0.01	No	11	18.18	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.002991	0.002172	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	BGWC-21	0.001536	0.0008071	0.01	No	11	36.36	No	0.01	Param.
Arsenic (mg/L)	BGWC-20	0.001802	0.001284	0.01	No	11	36.36	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008208	0.003319	0.01	No	11	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.003148	0.00167	0.01	No	11	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-14	0.003869	0.001616	0.01	No	12	33.33	No	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.002712	0.0009617	0.01	No	11	18.18	No	0.01	Param.
Barium (mg/L)	BGWC-9	0.03423	0.02733	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03274	0.02381	2	No	11	0	x^2	0.01	Param.
Barium (mg/L)	BGWC-16	0.03194	0.02692	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-12	0.03323	0.02773	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.06991	0.05226	2	No	11	0	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-17	0.0193	0.01557	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09483	0.08784	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.038	0.03035	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.04099	0.03337	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.04269	0.03768	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-25	0.03207	0.02149	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04987	0.04262	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03469	0.02913	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-24	0.1292	0.07694	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-23	0.09436	0.08195	2	No	11	0	ln(x)	0.01	Param.
Barium (mg/L)	BGWC-14	0.0835	0.07065	2	No	12	0	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.208	0.1249	2	No	11	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-9	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-8	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0013	0.0011	0.005	No	11	0	No	0.006	NP (normality)
Cadmium (mg/L)	BGWC-12	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-10	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-17	0.0001465	0.00009406	0.005	No	11	27.27	x^(1/3)	0.01	Param.
Cadmium (mg/L)	BGWC-22	0.0005	0.0002	0.005	No	11	90.91	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-18	0.0005772	0.000185	0.005	No	11	18.18	No	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0005	0.0001	0.005	No	11	81.82	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-7	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-25	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-21	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0005	0.00008	0.005	No	11	90.91	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.00478	0.001387	0.005	No	11	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-23	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-14	0.0005	0.0005	0.005	No	12	100	No	0.01	NP (NDs)

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 5:07 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-30	0.0004318	0.0001904	0.005	No	11	18.18	No	0.01	Param.
Cobalt (mg/L)	BGWC-9	0.005	0.0003	0.01	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-8	0.005	0.00013	0.01	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.005151	0.004231	0.01	No	11	9.091	No	0.01	Param.
Cobalt (mg/L)	BGWC-12	0.005	0.0003	0.01	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-17	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	**BGWC-22**	**0.01617**	**0.01018**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	BGWC-18	0.005	0.0005	0.01	No	11	63.64	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-7	0.005	0.0005	0.01	No	11	36.36	No	0.006	NP (normality)
Cobalt (mg/L)	BGWC-25	0.005	0.0006	0.01	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.005	0.0004	0.01	No	11	72.73	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.005	0.0008	0.01	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.003959	0.002241	0.01	No	11	9.091	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.005	0.0015	0.01	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-14	0.005	0.0003	0.01	No	12	83.33	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.005	0.0006	0.01	No	11	27.27	No	0.006	NP (normality)
Fluoride (mg/L)	BGWC-9	0.3468	0.1285	4	No	12	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.0631	0.0222	4	No	12	33.33	No	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.2894	0.0737	4	No	12	25	No	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1628	0.02617	4	No	12	33.33	No	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1937	0.0498	4	No	12	16.67	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.3558	0.1326	4	No	12	8.333	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-22	0.5021	0.2445	4	No	12	0	No	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.2474	0.0773	4	No	12	8.333	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-19	0.1989	0.05487	4	No	12	16.67	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2057	0.1054	4	No	12	8.333	No	0.01	Param.
Fluoride (mg/L)	BGWC-25	0.1204	0.05297	4	No	12	25	No	0.01	Param.
Fluoride (mg/L)	BGWC-21	0.08266	0.03151	4	No	12	33.33	No	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.199	0.01659	4	No	12	25	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	2.145	0.2133	4	No	12	8.333	No	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.1972	0.03382	4	No	12	16.67	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14	0.3003	0.1113	4	No	12	16.67	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.4473	0.106	4	No	12	0	No	0.01	Param.
Lithium (mg/L)	BGWC-9	0.025	0.0012	0.05	No	11	63.64	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-8	0.025	0.001	0.05	No	11	90.91	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-16	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-12	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-10	0.025	0.0011	0.05	No	11	45.45	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-17	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-22	0.024	0.0114	0.05	No	11	0	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-18	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-19	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-7	0.0102	0.0079	0.05	No	11	9.091	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-25	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-21	0.025	0.025	0.05	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02376	0.01686	0.05	No	11	0	No	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0075	0.0053	0.05	No	11	9.091	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-23	0.01333	0.008854	0.05	No	11	0	No	0.01	Param.

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 5:07 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lithium (mg/L)	BGWC-14	0.025	0.025	0.05	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-30	0.01933	0.01128	0.05	No	11	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003567	0.002706	0.01	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.00413	0.001461	0.01	No	11	18.18	No	0.01	Param.
Molybdenum (mg/L)	BGWC-16	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-12	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0049	0.0032	0.01	No	11	0	No	0.006	NP (normality)
Molybdenum (mg/L)	BGWC-17	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	**BGWC-22**	**0.07188**	**0.06061**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	BGWC-18	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-19	0.005	0.005	0.01	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-7	0.01233	0.008457	0.01	No	11	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.00437	0.001916	0.01	No	11	36.36	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.002394	0.001375	0.01	No	11	45.45	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	**BGWC-20**	**0.01467**	**0.01206**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	BGWC-24	0.004347	0.001697	0.01	No	11	18.18	No	0.01	Param.
Molybdenum (mg/L)	**BGWC-23**	**0.01331**	**0.01233**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	BGWC-14	0.01084	0.006576	0.01	No	12	0	No	0.01	Param.
Molybdenum (mg/L)	**BGWC-30**	**0.01995**	**0.01311**	**0.01**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	BGWC-9	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-8	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-16	0.0003	0.00019	0.002	No	11	0	No	0.006	NP (normality)
Thallium (mg/L)	BGWC-12	0.0005	0.00008	0.002	No	11	72.73	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-10	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-17	0.0005	0.00008	0.002	No	11	54.55	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0006774	0.0005008	0.002	No	11	0	No	0.01	Param.
Thallium (mg/L)	BGWC-18	0.0005	0.00006	0.002	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-19	0.0005	0.00006	0.002	No	11	54.55	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-7	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-25	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-21	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-20	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0004447	0.0002471	0.002	No	11	18.18	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.0005	0.0001	0.002	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-14	0.0005	0.00017	0.002	No	12	91.67	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-30	0.0007759	0.0005477	0.002	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-9	1.12	0.4308	5	No	11	27.27	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-8	0.6219	0.2292	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-16	1.166	0.3372	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-12	0.9391	0.1889	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-10	1.475	0.6821	5	No	11	18.18	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-17	0.7578	0.3477	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-22	2.37	1.594	5	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-18	0.7694	0.3223	5	No	11	27.27	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-19	1.28	0.3425	5	No	11	27.27	No	0.01	Param.
Total Radium (pCi/L)	BGWC-7	1.874	1.019	5	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-25	1.048	0.3579	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-21	0.8929	0.4441	5	No	11	27.27	No	0.01	Param.
Total Radium (pCi/L)	BGWC-20	1.705	1	5	No	11	27.27	No	0.01	Param.
Total Radium (pCi/L)	BGWC-24	3.178	2.148	5	No	11	0	No	0.01	Param.

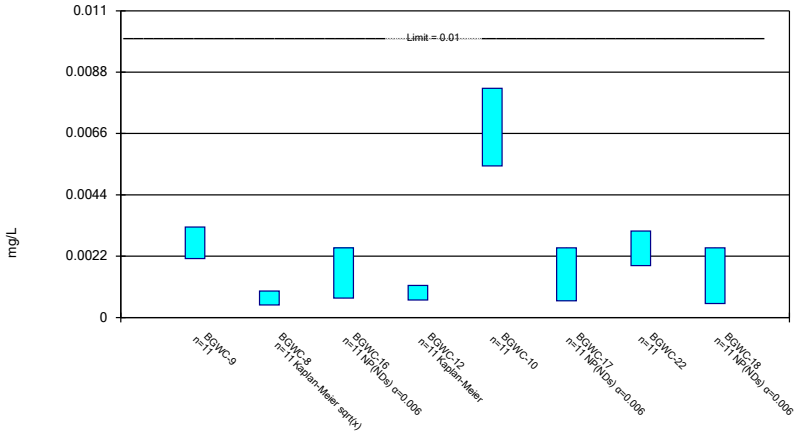
Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 5:07 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Total Radium (pCi/L)	BGWC-23	1.792	0.7999	5	No	11	9.091	No	0.01	Param.
Total Radium (pCi/L)	BGWC-14	6.623	4.39	5	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-30	2.962	1.246	5	No	10	20	No	0.01	Param.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Arsenic Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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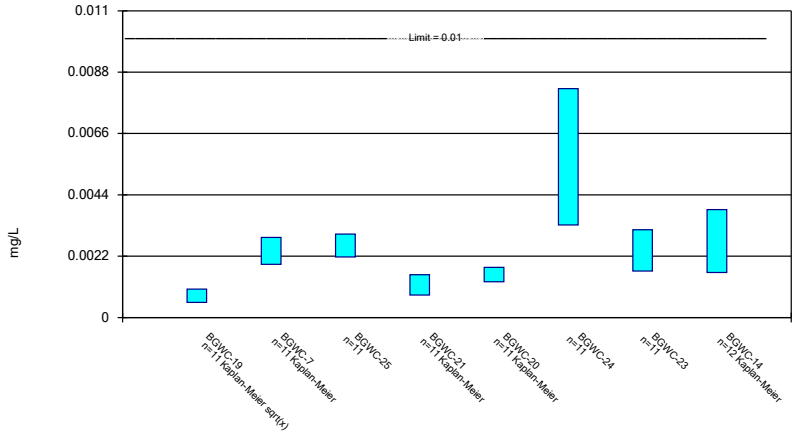
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



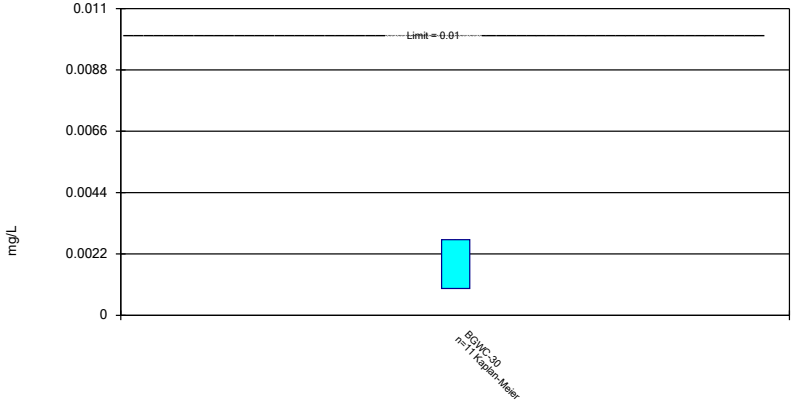
Constituent: Arsenic Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



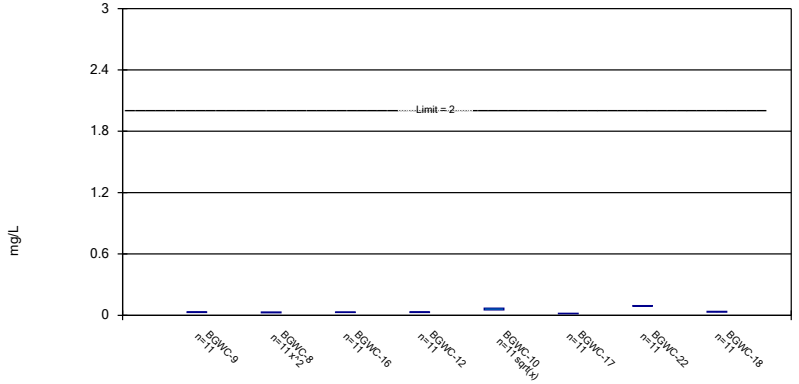
Constituent: Arsenic Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	0.0022							
6/7/2016		0.00018 (J)	<0.005	<0.005	0.0039	<0.005		
6/8/2016							0.0012 (J)	<0.005
8/10/2016		<0.005						
8/11/2016	0.0028 (J)		<0.005			<0.005		
8/12/2016				0.0009 (J)				<0.005
8/16/2016					0.0091			
8/18/2016							0.0022 (J)	
10/4/2016		<0.005						
10/5/2016	0.002 (J)							
10/6/2016				<0.005				
10/7/2016			<0.005		0.0074	<0.005		<0.005
10/10/2016							0.002 (J)	
12/2/2016		<0.005						
12/5/2016	<0.005			<0.005				
12/6/2016			<0.005		0.0044 (J)	<0.005		<0.005
12/8/2016							<0.005	
2/14/2017		<0.005						
2/15/2017	0.0033 (J)			<0.005				
2/16/2017			<0.005		0.0081	<0.005		<0.005
2/17/2017							0.0023 (J)	
4/14/2017		0.0007 (J)						
4/17/2017	0.0028 (J)							
4/18/2017			0.0007 (J)	0.0009 (J)	0.0084			
4/19/2017						0.0012 (J)		0.0013 (J)
4/20/2017							0.0028 (J)	
5/26/2017	0.0035 (J)	0.0008 (J)						
5/30/2017			0.0008 (J)			0.0006 (J)		
6/1/2017								0.0005 (J)
6/2/2017				0.0015 (J)	0.008			
6/5/2017							0.0035 (J)	
7/10/2017		0.0011 (J)						
7/11/2017	0.0033 (J)							
7/12/2017					0.0063			
7/13/2017				0.0006 (J)				
7/14/2017			0.0008 (J)			<0.005		<0.005
7/19/2017							0.0028 (J)	
3/26/2018		0.0009 (U*)						
3/27/2018	0.0021 (J)		0.0014 (J)		0.0064	0.00076 (J)		0.00066 (J)
3/28/2018				0.0015 (J)				
3/29/2018							0.0037 (J)	
6/12/2018	0.0015 (J)	0.00065 (J)	0.00073 (J)					
6/14/2018				0.00096 (J)	0.0075	<0.005	0.0027 (J)	<0.005
10/16/2018		0.00064 (J)						
10/17/2018	0.0035 (J)			<0.005		<0.005		
10/18/2018			<0.005		0.0056			<0.005
10/22/2018							0.0016 (J)	
Mean	0.002682	0.001361	0.001766	0.001715	0.006827	0.002051	0.002482	0.002042
Std. Dev.	0.000678	0.0009296	0.0008627	0.0007947	0.001669	0.0007816	0.0007441	0.0008072
Upper Lim.	0.003247	0.0009494	0.0025	0.001148	0.008218	0.0025	0.003102	0.0025
Lower Lim.	0.002117	0.0004503	0.0007	0.0006265	0.005437	0.0006	0.001862	0.0005

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	0.00046 (J)	0.0024	0.0037	0.0015	0.0011 (J)			
6/9/2016						0.0016	0.0012 (J)	
6/10/2016								0.0049
8/11/2016		0.0024 (J)						
8/12/2016	0.0008 (J)				0.0017 (J)			
8/15/2016			0.003 (J)					
8/17/2016								0.0042 (J)
8/18/2016				<0.005		0.0054	0.003 (J)	
10/6/2016		<0.005						
10/7/2016	<0.005							<0.005
10/10/2016			0.0026 (J)	<0.005	<0.005	0.0079	0.0021 (J)	
12/6/2016		<0.005						
12/7/2016	<0.005				<0.005	0.0121	0.0023 (J)	
12/8/2016			<0.005	<0.005				<0.005
2/15/2017		0.003 (J)						
2/16/2017	<0.005							
2/17/2017				<0.005	<0.005			
2/20/2017			0.0029 (J)			0.0063	0.0025 (J)	
2/21/2017								<0.005
4/18/2017		0.0029 (J)						
4/19/2017	0.0015 (J)			0.002 (J)	0.002 (J)	0.0051	0.0032 (J)	
4/20/2017			0.0024 (J)					
4/21/2017								0.0039 (J)
6/1/2017	0.0008 (J)		0.0025 (J)	0.0011 (J)	0.0017 (J)			
6/2/2017		0.0031 (J)						
6/5/2017						0.0072	0.0043 (J)	
6/6/2017								0.001 (J)
6/15/2017								0.0024 (J)
7/14/2017	0.0006 (J)	0.0017 (J)						
7/17/2017			0.0021 (J)			0.0031 (J)	0.0017 (J)	
7/18/2017				0.0015 (J)	0.0018 (J)			
7/19/2017								0.0031 (J)
3/27/2018	0.00082 (J)	0.0028 (J)						
3/28/2018			0.0019 (J)	0.0012 (J)	0.0018 (J)			
3/29/2018						0.0075 (J)	0.0028 (J)	0.0017 (J)
6/13/2018		0.0023 (J)			0.0015 (J)	0.0045 (J)	0.0019 (J)	
6/14/2018			0.0022 (J)	0.00087 (J)				
6/15/2018	0.00074 (J)							0.00074 (J)
10/18/2018		0.0015 (J)						
10/19/2018	<0.005			0.00059 (J)				<0.005
10/22/2018			0.0026 (J)		<0.005	0.0027 (J)	0.0015 (J)	
Mean	0.001429	0.002464	0.002582	0.001705	0.001964	0.005764	0.002409	0.002662
Std. Dev.	0.0008864	0.0005045	0.0004916	0.0007253	0.0004802	0.002934	0.0008871	0.00123
Upper Lim.	0.001019	0.002874	0.002991	0.001536	0.001802	0.008208	0.003148	0.003869
Lower Lim.	0.0005414	0.001911	0.002172	0.0008071	0.001284	0.003319	0.00167	0.001616

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	<0.005
2/7/2017	<0.005
3/27/2017	0.0019 (J)
4/17/2017	0.0017 (J)
5/22/2017	0.0034 (J)
6/5/2017	0.0039 (J)
7/11/2017	0.0016 (J)
8/23/2017	0.001 (J)
3/26/2018	0.0015 (U*)
6/15/2018	0.00089 (J)
10/22/2018	0.00064 (J)
Mean	0.001957
Std. Dev.	0.001032
Upper Lim.	0.002712
Lower Lim.	0.0009617

Confidence Interval

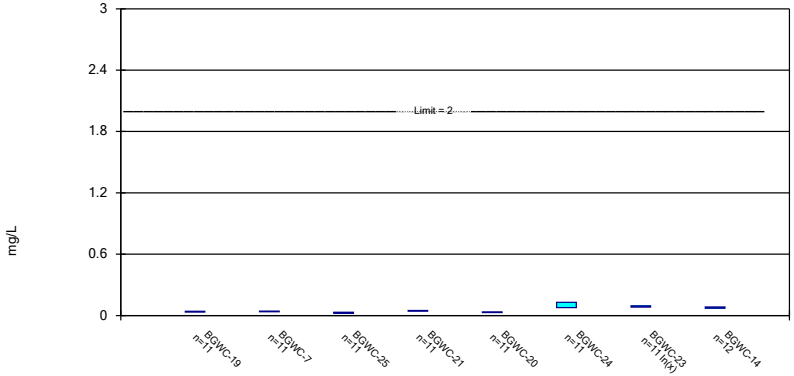
Constituent: Barium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	0.034							
6/7/2016		0.0051	0.027	0.027	0.091	0.017		
6/8/2016							0.092	0.039
8/10/2016		0.0264						
8/11/2016	0.0305		0.0292			0.0152		
8/12/2016				0.026				0.031
8/16/2016					0.0667			
8/18/2016							0.0953	
10/4/2016		0.0316						
10/5/2016	0.0289							
10/6/2016				0.0308				
10/7/2016			0.0295		0.0631	0.0225		0.0427
10/10/2016							0.0954	
12/2/2016		0.026						
12/5/2016	0.0269			0.0258				
12/6/2016			0.0367		0.0659	0.0171		0.0398
12/8/2016							0.0991	
2/14/2017		0.0299						
2/15/2017	0.0299			0.029				
2/16/2017			0.0315		0.0621	0.0187		0.0309
2/17/2017							0.0927	
4/14/2017		0.0275						
4/17/2017	0.0318							
4/18/2017			0.0272	0.0294	0.0545			
4/19/2017						0.0183		0.0325
4/20/2017							0.086	
5/26/2017	0.0341	0.0328						
5/30/2017			0.0316			0.0179		
6/1/2017								0.0331
6/2/2017				0.0354	0.0555			
6/5/2017							0.0875	
7/10/2017		0.0305						
7/11/2017	0.0355							
7/12/2017					0.0572			
7/13/2017				0.0329				
7/14/2017			0.029			0.0191		0.0349
7/19/2017							0.0877	
3/26/2018		0.029						
3/27/2018	0.026		0.027		0.051	0.015		0.027
3/28/2018				0.034				
3/29/2018							0.088	
6/12/2018	0.024	0.031	0.029					
6/14/2018				0.032	0.053	0.016	0.093	0.032
10/16/2018		0.034						
10/17/2018	0.037			0.033		0.015		
10/18/2018			0.026		0.053			0.033
10/22/2018							0.088	
Mean	0.03078	0.02762	0.02943	0.03048	0.06118	0.01744	0.09134	0.03417
Std. Dev.	0.004143	0.007883	0.003014	0.003296	0.0113	0.002241	0.004198	0.004588
Upper Lim.	0.03423	0.03274	0.03194	0.03323	0.06991	0.0193	0.09483	0.038
Lower Lim.	0.02733	0.02381	0.02692	0.02773	0.05226	0.01557	0.08784	0.03035

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



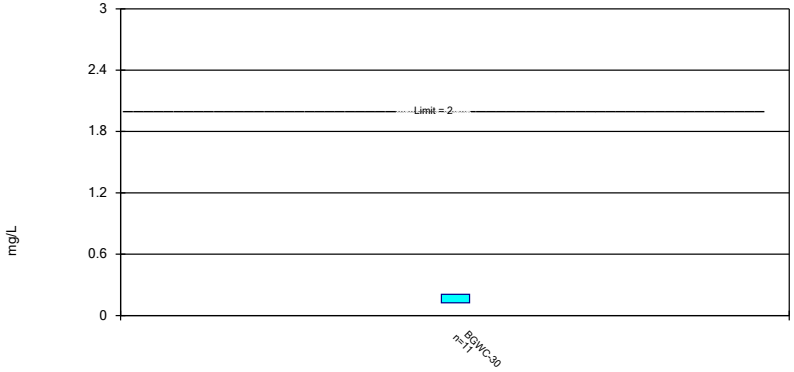
Constituent: Barium Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



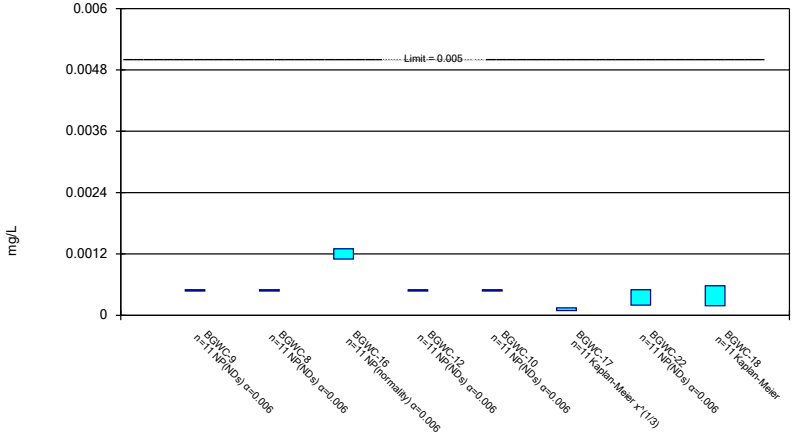
Constituent: Barium Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



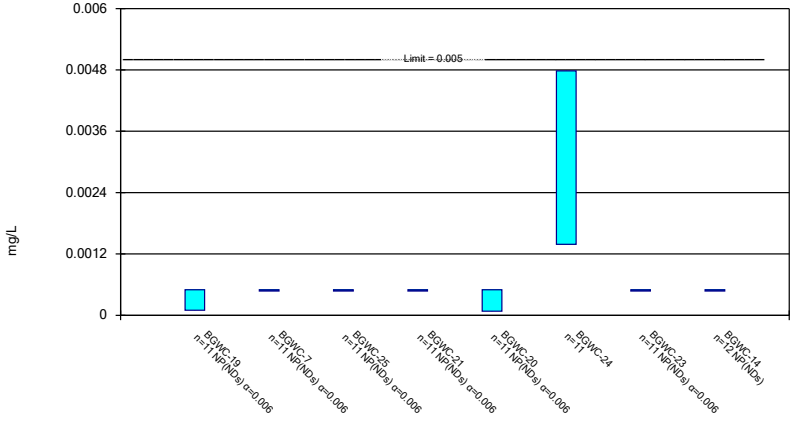
Constituent: Cadmium Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	0.036	0.048	0.038	0.054	0.036			
6/9/2016						0.14	0.11	
6/10/2016								0.08
8/11/2016		0.0428						
8/12/2016	0.0412				0.0283			
8/15/2016			0.0321					
8/17/2016								0.0801
8/18/2016				0.0479		0.113	0.0893	
10/6/2016		0.0404						
10/7/2016	0.0427							0.0764
10/10/2016			0.0283	0.0433	0.0288	0.0888	0.0839	
12/6/2016		0.0385						
12/7/2016	0.0338				0.0279	0.0289	0.0912	
12/8/2016			0.0294	0.0474				0.0723
2/15/2017		0.039						
2/16/2017	0.0407							
2/17/2017				0.0483	0.0316			
2/20/2017			0.0275			0.0999	0.0813	
2/21/2017								0.0789
4/18/2017		0.0392						
4/19/2017	0.042			0.0486	0.0367	0.114	0.087	
4/20/2017			0.0279					
4/21/2017								0.0871
6/1/2017	0.0341		0.0313	0.0468	0.0361			
6/2/2017		0.0407						
6/5/2017						0.135	0.084	
6/6/2017								0.0789
6/15/2017								0.0822
7/14/2017	0.0405	0.0394						
7/17/2017			0.0251			0.134	0.0809	
7/18/2017				0.0494	0.0346			
7/19/2017								0.091
3/27/2018	0.029	0.039						
3/28/2018			0.018	0.043	0.03			
3/29/2018						0.08	0.085	0.067
6/13/2018		0.038			0.031	0.1	0.091	
6/14/2018			0.019	0.042				
6/15/2018	0.032							0.066
10/18/2018		0.037						
10/19/2018	0.037			0.038				0.065
10/22/2018			0.018		0.03	0.1	0.087	
Mean	0.03718	0.04018	0.02678	0.04625	0.03191	0.1031	0.08824	0.07708
Std. Dev.	0.004576	0.003006	0.006349	0.004353	0.003339	0.03134	0.008021	0.008192
Upper Lim.	0.04099	0.04269	0.03207	0.04987	0.03469	0.1292	0.09436	0.0835
Lower Lim.	0.03337	0.03768	0.02149	0.04262	0.02913	0.07694	0.08195	0.07065

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.237
2/7/2017	0.191
3/27/2017	0.197
4/17/2017	0.192
5/22/2017	0.197
6/5/2017	0.201
7/11/2017	0.179
8/23/2017	0.15
3/26/2018	0.1
6/15/2018	0.087
10/22/2018	0.1
Mean	0.1665
Std. Dev.	0.04986
Upper Lim.	0.208
Lower Lim.	0.1249

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	<0.001							
6/7/2016		<0.001	0.0011 (J)	<0.001	<0.001	<0.001		
6/8/2016							<0.001	0.00063 (J)
8/10/2016		<0.001						
8/11/2016	<0.001		0.0011			0.0001 (J)		
8/12/2016				<0.001				0.0004 (J)
8/16/2016					<0.001			
8/18/2016							<0.001	
10/4/2016		<0.001						
10/5/2016	<0.001							
10/6/2016				<0.001				
10/7/2016			0.0012		<0.001	0.0002 (J)		0.0008 (J)
10/10/2016							<0.001	
12/2/2016		<0.001						
12/5/2016	<0.001			<0.001				
12/6/2016			0.0012		<0.001	0.0001 (J)		0.0006 (J)
12/8/2016							0.0002 (J)	
2/14/2017		<0.001						
2/15/2017	<0.001			<0.001				
2/16/2017			0.0015		<0.001	0.0001 (J)		0.0002 (J)
2/17/2017							<0.001	
4/14/2017		<0.001						
4/17/2017	<0.001							
4/18/2017			0.0012	<0.001	<0.001			
4/19/2017						0.0001 (J)		9E-05 (J)
4/20/2017							<0.001	
5/26/2017	<0.001	<0.001						
5/30/2017			0.0011			0.0002 (J)		
6/1/2017								0.0003 (J)
6/2/2017				<0.001	<0.001			
6/5/2017							<0.001	
7/10/2017		<0.001						
7/11/2017	<0.001							
7/12/2017					<0.001			
7/13/2017				<0.001				
7/14/2017			0.0012			0.0002 (J)		0.0002 (J)
7/19/2017							<0.001	
3/26/2018		<0.001						
3/27/2018	<0.001		0.0013		<0.001	<0.001		<0.001
3/28/2018				<0.001				
3/29/2018							<0.001	
6/12/2018	<0.001	<0.001	0.0011					
6/14/2018				<0.001	<0.001	0.00015 (J)	<0.001	<0.001
10/16/2018		<0.001						
10/17/2018	<0.001			<0.001		<0.001		
10/18/2018			0.0012		<0.001			0.00032 (J)
10/22/2018							<0.001	
Mean	0.0005	0.0005	0.0012	0.0005	0.0005	0.0002409	0.0004727	0.0004127
Std. Dev.	0	0	0.0001183	0	0	0.0001715	9.045E-05	0.0002153
Upper Lim.	0.0005	0.0005	0.0013	0.0005	0.0005	0.0001465	0.0005	0.0005772
Lower Lim.	0.0005	0.0005	0.0011	0.0005	0.0005	9.406E-05	0.0002	0.000185

Confidence Interval

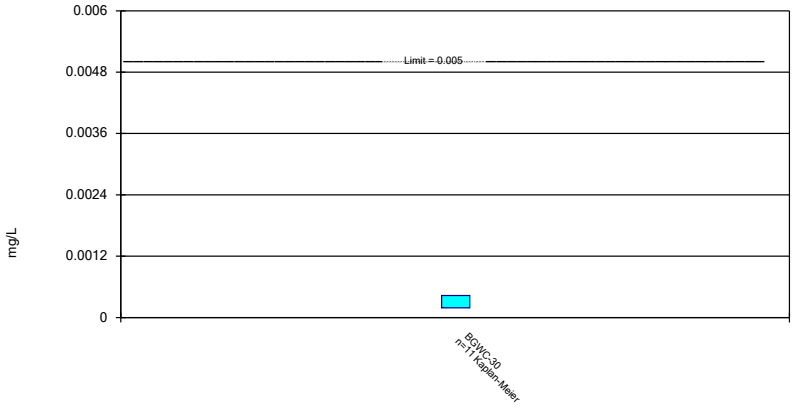
Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	<0.001	<0.001	<0.001	<0.001	<0.001			
6/9/2016						0.00052 (J)	<0.001	
6/10/2016								<0.001
8/11/2016		<0.001						
8/12/2016	<0.001				<0.001			
8/15/2016			<0.001					
8/17/2016								<0.001
8/18/2016				<0.001		0.0009 (J)	<0.001	
10/6/2016		<0.001						
10/7/2016	0.0001 (J)							<0.001
10/10/2016			<0.001	<0.001	<0.001	0.0017	<0.001	
12/6/2016		<0.001						
12/7/2016	<0.001				<0.001	0.0004 (J)	<0.001	
12/8/2016			<0.001	<0.001				<0.001
2/15/2017		<0.001						
2/16/2017	<0.001							
2/17/2017				<0.001	8E-05 (J)			
2/20/2017			<0.001			0.0028	<0.001	
2/21/2017								<0.001
4/18/2017		<0.001						
4/19/2017	<0.001			<0.001	<0.001	0.0035	<0.001	
4/20/2017			<0.001					
4/21/2017								<0.001
6/1/2017	0.0001 (J)		<0.001	<0.001	<0.001			
6/2/2017		<0.001						
6/5/2017						0.0035	<0.001	
6/6/2017								<0.001
6/15/2017								<0.001
7/14/2017	<0.001	<0.001						
7/17/2017			<0.001			0.0037	<0.001	
7/18/2017				<0.001	<0.001			
7/19/2017								<0.001
3/27/2018	<0.001	<0.001						
3/28/2018			<0.001	<0.001	<0.001			
3/29/2018						0.0063	<0.001	<0.001
6/13/2018		<0.001			<0.001	0.0053	<0.001	
6/14/2018			<0.001	<0.001				
6/15/2018	<0.001							<0.001
10/18/2018		<0.001						
10/19/2018	<0.001			<0.001				<0.001
10/22/2018			<0.001		<0.001	0.0053	<0.001	
Mean	0.0004273	0.0005	0.0005	0.0005	0.0004618	0.003084	0.0005	0.0005
Std. Dev.	0.0001618	0	0	0	0.0001266	0.002036	0	0
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0005	0.00478	0.0005	0.0005
Lower Lim.	0.0001	0.0005	0.0005	0.0005	8E-05	0.001387	0.0005	0.0005

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

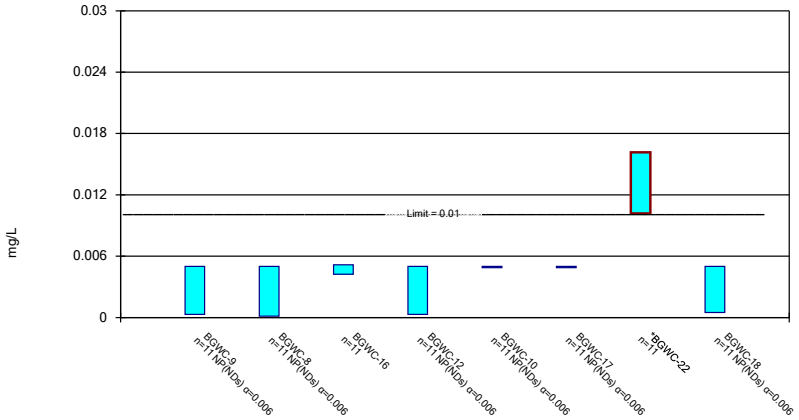


Constituent: Cadmium Analysis Run 12/19/2018 5:04 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

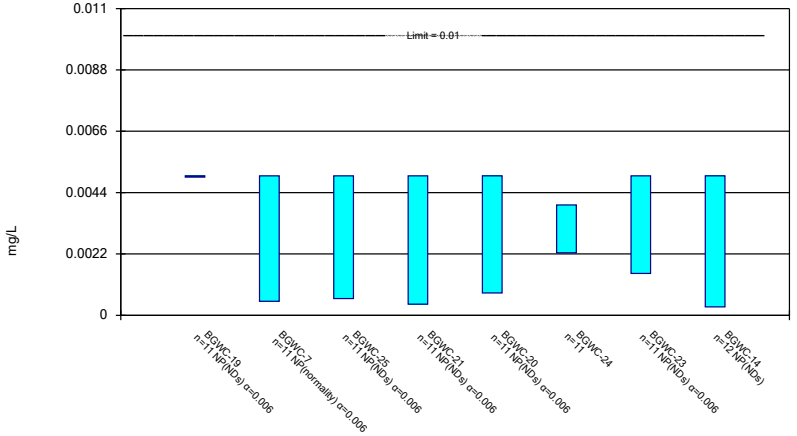


Constituent: Cobalt Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

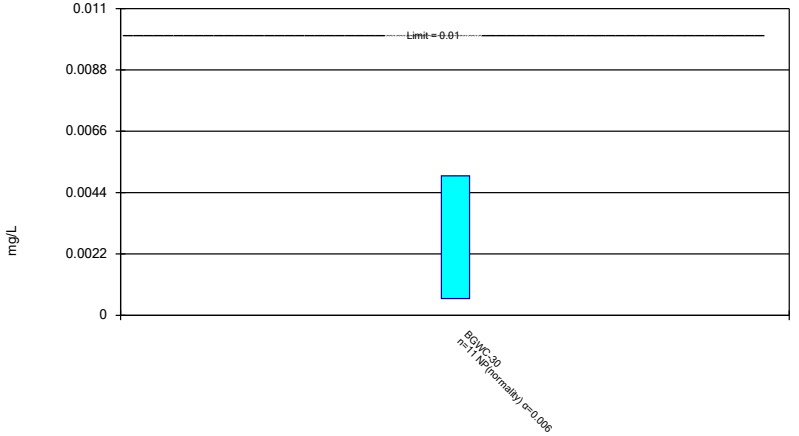


Constituent: Cobalt Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Cobalt Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.0003 (J)
2/7/2017	0.0006 (J)
3/27/2017	0.0003 (J)
4/17/2017	0.0002 (J)
5/22/2017	0.0003 (J)
6/5/2017	0.0003 (J)
7/11/2017	0.0005 (J)
8/23/2017	0.0004 (J)
3/26/2018	<0.001
6/15/2018	0.0002 (J)
10/22/2018	<0.001
Mean	0.0003727
Std. Dev.	0.0001348
Upper Lim.	0.0004318
Lower Lim.	0.0001904

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	<0.01							
6/7/2016		0.00013 (J)	0.0037	<0.01	<0.01	<0.01		
6/8/2016							0.0079	0.00071 (J)
8/10/2016		0.0003 (J)						
8/11/2016	0.0003 (J)		0.0039 (J)			<0.01		
8/12/2016				<0.01				0.0006 (J)
8/16/2016					<0.01			
8/18/2016							0.0109	
10/4/2016		<0.01						
10/5/2016	<0.01							
10/6/2016				<0.01				
10/7/2016			0.0043 (J)		<0.01	<0.01		0.0005 (J)
10/10/2016							0.011	
12/2/2016		<0.01						
12/5/2016	0.0006 (J)			0.0006 (J)				
12/6/2016			0.005 (J)		<0.01	<0.01		0.0009 (J)
12/8/2016							0.013	
2/14/2017		<0.01						
2/15/2017	<0.01			<0.01				
2/16/2017			0.0054 (J)		<0.01	<0.01		<0.01
2/17/2017							0.0122	
4/14/2017		<0.01						
4/17/2017	<0.01							
4/18/2017			0.0054 (J)	<0.01	<0.01			
4/19/2017						<0.01		<0.01
4/20/2017							0.0116	
5/26/2017	<0.01	<0.01						
5/30/2017			0.0045 (J)			<0.01		
6/1/2017								<0.01
6/2/2017				<0.01	<0.01			
6/5/2017							0.0112	
7/10/2017		<0.01						
7/11/2017	<0.01							
7/12/2017					<0.01			
7/13/2017				0.0003 (J)				
7/14/2017			0.0049 (J)			<0.01		<0.01
7/19/2017							0.0131	
3/26/2018		<0.01						
3/27/2018	<0.01		<0.01		<0.01	<0.01		<0.01
3/28/2018				<0.01				
3/29/2018							0.016	
6/12/2018	<0.01	<0.01	0.0048 (J)					
6/14/2018				<0.01	<0.01	<0.01	0.017	<0.01
10/16/2018		<0.01						
10/17/2018	<0.01			<0.01		<0.01		
10/18/2018			0.0047 (J)		<0.01			<0.01
10/22/2018							0.021	
Mean	0.004173	0.00413	0.004691	0.004173	0.005	0.005	0.01317	0.003428
Std. Dev.	0.001842	0.001936	0.0005522	0.001842	0	0	0.003591	0.002183
Upper Lim.	0.005	0.005	0.005151	0.005	0.005	0.005	0.01617	0.005
Lower Lim.	0.0003	0.00013	0.004231	0.0003	0.005	0.005	0.01018	0.0005

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	<0.01	0.00081 (J)	<0.01	0.00041 (J)	<0.01			
6/9/2016						0.0026	<0.01	
6/10/2016								<0.01
8/11/2016		0.0007 (J)						
8/12/2016	<0.01				<0.01			
8/15/2016			<0.01					
8/17/2016								<0.01
8/18/2016				<0.01		0.0021 (J)	<0.01	
10/6/2016		<0.01						
10/7/2016	<0.01							<0.01
10/10/2016			<0.01	<0.01	<0.01	0.0018 (J)	<0.01	
12/6/2016		0.0009 (J)						
12/7/2016	<0.01				0.0008 (J)	0.0018 (J)	0.0015 (J)	
12/8/2016			0.0006 (J)	0.0006 (J)				<0.01
2/15/2017		<0.01						
2/16/2017	<0.01							
2/17/2017				<0.01	<0.01			
2/20/2017			<0.01			0.0027 (J)	<0.01	
2/21/2017								<0.01
4/18/2017		0.0005 (J)						
4/19/2017	<0.01			<0.01	<0.01	0.0032 (J)	<0.01	
4/20/2017			<0.01					
4/21/2017								<0.01
6/1/2017	<0.01		<0.01	<0.01	<0.01			
6/2/2017		0.0006 (J)						
6/5/2017						0.0034 (J)	<0.01	
6/6/2017								<0.01
6/15/2017								0.0003 (J)
7/14/2017	<0.01	0.0006 (J)						
7/17/2017			<0.01			0.0033 (J)	<0.01	
7/18/2017				0.0004 (J)	<0.01			
7/19/2017								0.0003 (J)
3/27/2018	<0.01	<0.01						
3/28/2018			<0.01	<0.01	<0.01			
3/29/2018						<0.01	<0.01	<0.01
6/13/2018		0.00068 (J)			<0.01	0.0039 (J)	<0.01	
6/14/2018			<0.01	<0.01				
6/15/2018	<0.01							<0.01
10/18/2018		<0.01						
10/19/2018	<0.01			<0.01				<0.01
10/22/2018			<0.01		<0.01	0.0043 (J)	<0.01	
Mean	0.005	0.002254	0.0046	0.003765	0.004618	0.0031	0.004682	0.004217
Std. Dev.	0	0.00218	0.001327	0.002117	0.001266	0.001031	0.001055	0.001829
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.003959	0.005	0.005
Lower Lim.	0.005	0.0005	0.0006	0.0004	0.0008	0.002241	0.0015	0.0003

Confidence Interval

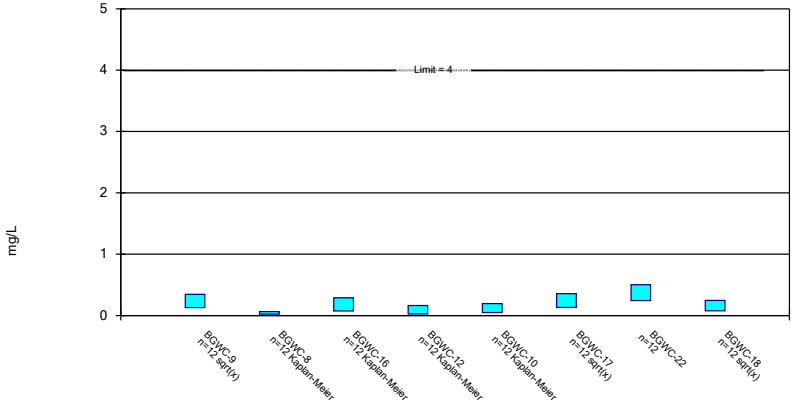
Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.0012 (J)
2/7/2017	0.0008 (J)
3/27/2017	0.001 (J)
4/17/2017	0.0009 (J)
5/22/2017	0.0008 (J)
6/5/2017	0.0008 (J)
7/11/2017	0.0008 (J)
8/23/2017	0.0006 (J)
3/26/2018	<0.01
6/15/2018	<0.01
10/22/2018	<0.01
Mean	0.001991
Std. Dev.	0.001938
Upper Lim.	0.005
Lower Lim.	0.0006

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

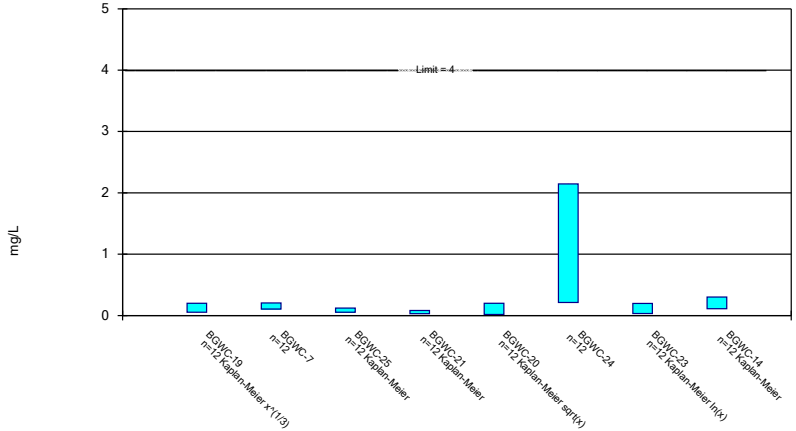


Constituent: Fluoride Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

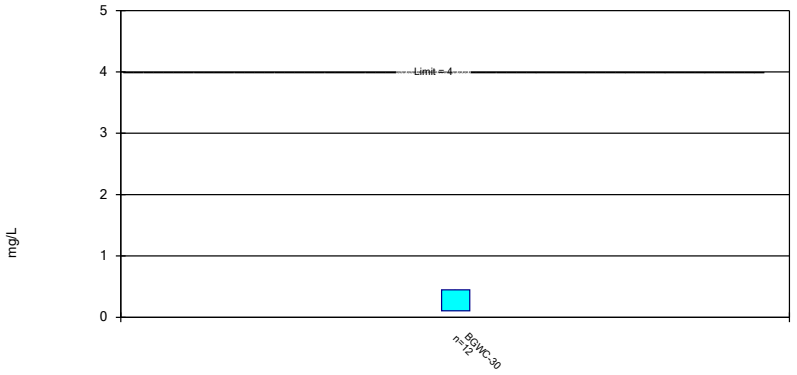


Constituent: Fluoride Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

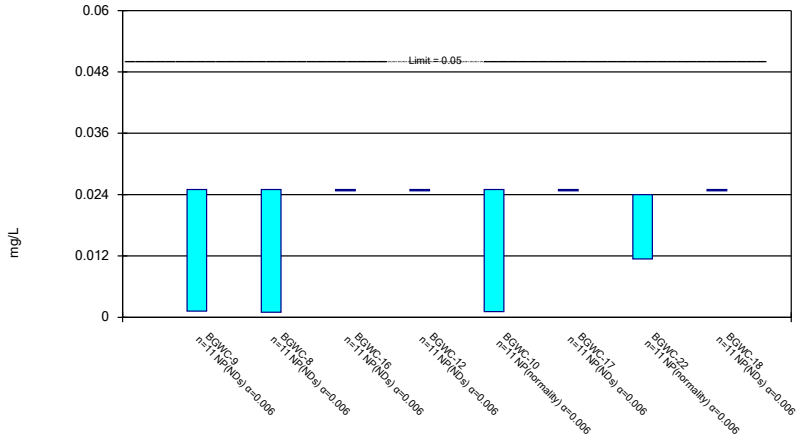


Constituent: Fluoride Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Lithium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	0.12 (J)							
6/7/2016		<0.3	<0.3	<0.3	0.09 (J)	0.15 (J)		
6/8/2016							0.43	0.1 (J)
8/10/2016		0.07 (J)						
8/11/2016	0.27 (J)		0.12 (J)			0.3 (J)		
8/12/2016				0.08 (J)				0.39
8/16/2016					0.09 (J)			
8/18/2016							0.3 (J)	
10/4/2016		0.07 (J)						
10/5/2016	0.12 (J)							
10/6/2016				0.06 (J)				
10/7/2016			0.08 (J)		0.17 (J)	0.14 (J)		0.16 (J)
10/10/2016							0.32	
12/2/2016		0.09 (J)						
12/5/2016	0.26 (J)			0.12 (J)				
12/6/2016			0.24 (J)		0.16 (J)	0.19 (J)		0.32
12/8/2016							0.26 (J)	
2/14/2017		0.02 (J)						
2/15/2017	0.46			0.33				
2/16/2017			0.31		0.38	0.51		0.38
2/17/2017							0.39	
4/14/2017		0.02 (J)						
4/17/2017	0.14 (J)							
4/18/2017			0.02 (J)	0.006 (J)	0.12 (J)			
4/19/2017						0.18 (J)		0.08 (J)
4/20/2017							0.34	
5/26/2017	0.13 (J)	0.02 (J)						
5/30/2017			0.51			0.15 (J)		
6/1/2017								0.09 (J)
6/2/2017				0.04 (J)	0.03 (J)			
6/5/2017							0.29 (J)	
7/10/2017		0.03 (J)						
7/11/2017	0.2 (J)							
7/12/2017					0.15 (J)			
7/13/2017				0.17 (J)				
7/14/2017			0.14 (J)			0.16 (J)		0.06 (J)
7/19/2017							0.33	
10/10/2017	0.61	<0.3		0.08 (J)				
10/11/2017			0.29 (J)		0.07 (J)	0.64		0.14 (J)
10/12/2017							0.31	
3/26/2018		<0.3						
3/27/2018	0.36		<0.3		<0.3	0.33		<0.3
3/28/2018				<0.3				
3/29/2018							0.58	
6/12/2018	0.13 (J)	0.061 (J)	0.061 (J)					
6/14/2018				<0.3	0.046 (J)	0.11 (J)	0.15 (J)	0.095 (J)
10/16/2018		<0.3						
10/17/2018	0.13 (J)			<0.3		<0.3		
10/18/2018			<0.3		<0.3			0.054 (J)
10/22/2018							0.78	
Mean	0.2442	0.08175	0.1851	0.1238	0.1338	0.2508	0.3733	0.1683
Std. Dev.	0.1588	0.05521	0.1345	0.08324	0.09044	0.167	0.1642	0.1232

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
Upper Lim.	0.3468	0.0631	0.2894	0.1628	0.1937	0.3558	0.5021	0.2474
Lower Lim.	0.1285	0.0222	0.0737	0.02617	0.0498	0.1326	0.2445	0.0773

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	<0.3	0.19 (J)	0.14 (J)	<0.3	0.09 (J)			
6/9/2016						<0.3	0.12 (J)	
6/10/2016								0.23
8/11/2016		0.15 (J)						
8/12/2016	0.2 (J)				0.04 (J)			
8/15/2016			0.08 (J)					
8/17/2016								0.12 (J)
8/18/2016				0.09 (J)		0.24 (J)	0.08 (J)	
10/6/2016		0.17 (J)						
10/7/2016	0.07 (J)							0.13 (J)
10/10/2016			0.1 (J)	0.04 (J)	0.06 (J)	0.3	0.09 (J)	
12/6/2016		0.22 (J)						
12/7/2016	0.09 (J)				0.07 (J)	0.05 (J)	0.08 (J)	
12/8/2016			0.06 (J)	0.08 (J)				0.31
2/15/2017		0.18 (J)						
2/16/2017	0.6							
2/17/2017				0.08 (J)	0.06 (J)			
2/20/2017			0.16 (J)			0.65	0.09 (J)	
2/21/2017								0.35
4/18/2017		0.11 (J)						
4/19/2017	0.09 (J)			0.04 (J)	0.005 (J)	0.21 (J)	0.03 (J)	
4/20/2017			0.02 (J)					
4/21/2017								0.04 (J)
6/1/2017	0.05 (J)		0.04 (J)	0.03 (J)	0.65			
6/2/2017		0.07 (J)						
6/5/2017						0.05 (J)	<0.3	
6/6/2017								0.36
7/14/2017	0.08 (J)	0.23 (J)						
7/17/2017			0.07 (J)			2.5	0.09 (J)	
7/18/2017				0.08 (J)	0.36			
7/19/2017								0.18 (J)
10/11/2017	0.11 (J)	0.1 (J)	0.11 (J)		<0.3	1.8	0.09 (J)	
10/12/2017				0.12 (J)				0.08 (J)
3/27/2018	<0.3	<0.3						
3/28/2018			<0.3	<0.3	<0.3			
3/29/2018						2	<0.3	<0.3
6/13/2018		0.25 (J)			0.038 (J)	3.1	0.71	
6/14/2018			<0.3	<0.3				
6/15/2018	0.07 (J)							0.41
10/18/2018		0.047 (J)						
10/19/2018	0.17 (J)			<0.3				<0.3
10/22/2018			<0.3		<0.3	3.1	0.81	
Mean	0.1525	0.1556	0.1025	0.09667	0.1519	1.179	0.2075	0.2092
Std. Dev.	0.1483	0.06391	0.04827	0.04638	0.1824	1.231	0.2609	0.1209
Upper Lim.	0.1989	0.2057	0.1204	0.08266	0.199	2.145	0.1972	0.3003
Lower Lim.	0.05487	0.1054	0.05297	0.03151	0.01659	0.2133	0.03382	0.1113

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.06 (J)
2/7/2017	0.09 (J)
3/27/2017	0.09 (J)
4/17/2017	0.36
5/22/2017	0.05 (J)
6/5/2017	0.32
7/11/2017	0.13 (J)
8/23/2017	0.17 (J)
10/10/2017	0.35
3/26/2018	0.75
6/15/2018	0.51
10/22/2018	0.44
Mean	0.2767
Std. Dev.	0.2175
Upper Lim.	0.4473
Lower Lim.	0.106

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	<0.05							
6/7/2016		<0.05	<0.05	<0.05	0.0065	<0.05		
6/8/2016							0.012	<0.05
8/10/2016		<0.05						
8/11/2016	<0.05		<0.05			<0.05		
8/12/2016				<0.05				<0.05
8/16/2016					<0.05			
8/18/2016							0.0118 (J)	
10/4/2016		<0.05						
10/5/2016	<0.05							
10/6/2016				<0.05				
10/7/2016			<0.05		<0.05	<0.05		<0.05
10/10/2016							0.0137 (J)	
12/2/2016		<0.05						
12/5/2016	<0.05			<0.05				
12/6/2016			<0.05		<0.05	<0.05		<0.05
12/8/2016							0.0154 (J)	
2/14/2017		<0.05						
2/15/2017	<0.05			<0.05				
2/16/2017			<0.05		<0.05	<0.05		<0.05
2/17/2017							0.0125 (J)	
4/14/2017		<0.05						
4/17/2017	0.0013 (J)							
4/18/2017			<0.05	<0.05	0.0011 (J)			
4/19/2017						<0.05		<0.05
4/20/2017							0.012 (J)	
5/26/2017	0.0013 (J)	<0.05						
5/30/2017			<0.05			<0.05		
6/1/2017								<0.05
6/2/2017				<0.05	0.0011 (J)			
6/5/2017							0.0114 (J)	
7/10/2017		<0.05						
7/11/2017	<0.05							
7/12/2017					<0.05			
7/13/2017				<0.05				
7/14/2017			<0.05			<0.05		<0.05
7/19/2017							0.0126 (J)	
3/26/2018		<0.05						
3/27/2018	0.0014 (J)		<0.05		0.0025 (J)	<0.05		<0.05
3/28/2018				<0.05				
3/29/2018							0.021 (J)	
6/12/2018	0.0012 (J)	<0.05	<0.05					
6/14/2018				<0.05	0.0011 (J)	<0.05	0.024 (J)	<0.05
10/16/2018		0.001 (J)						
10/17/2018	<0.05			<0.05		<0.05		
10/18/2018			<0.05		0.0016 (J)			<0.05
10/22/2018							0.034 (J)	
Mean	0.01638	0.02282	0.025	0.025	0.01263	0.025	0.0164	0.025
Std. Dev.	0.01196	0.007236	0	0	0.01194	0	0.007152	0
Upper Lim.	0.025	0.025	0.025	0.025	0.025	0.025	0.024	0.025
Lower Lim.	0.0012	0.001	0.025	0.025	0.0011	0.025	0.0114	0.025

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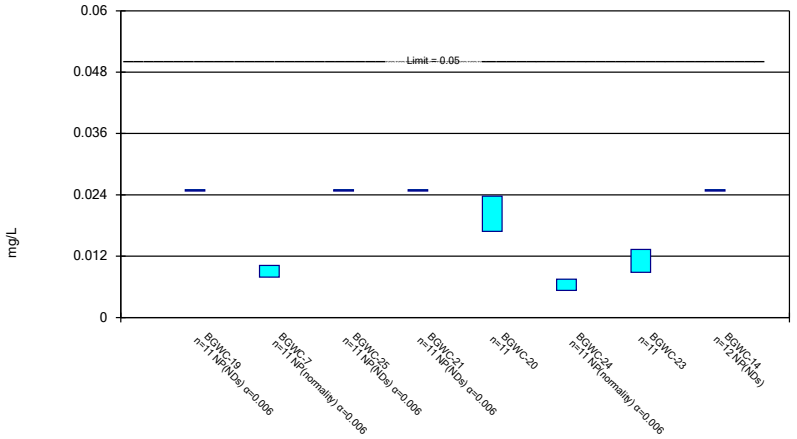
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Lithium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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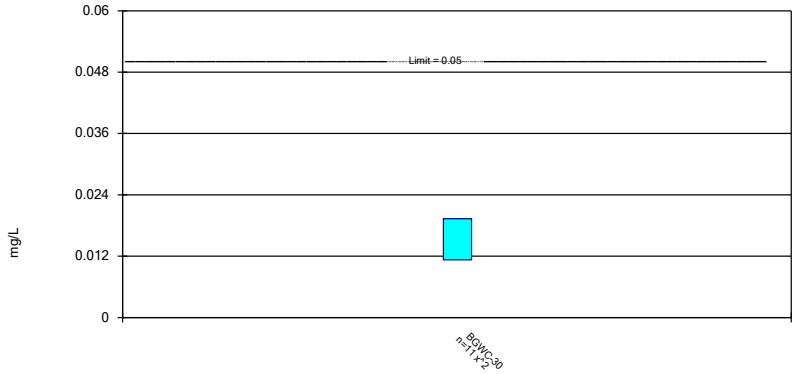
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Lithium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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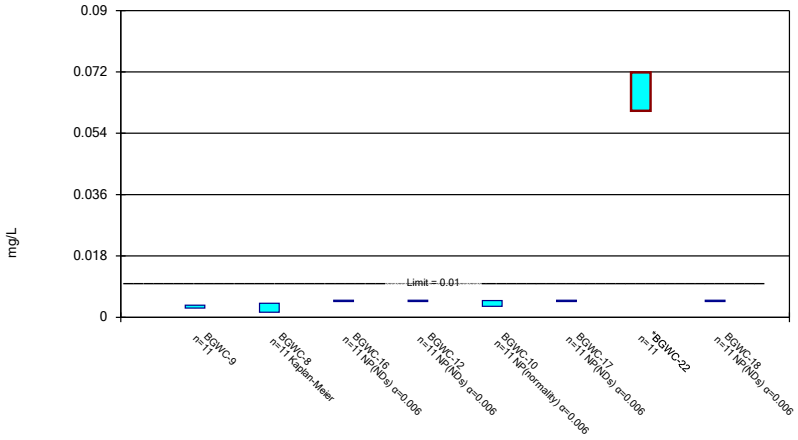
Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Molybdenum Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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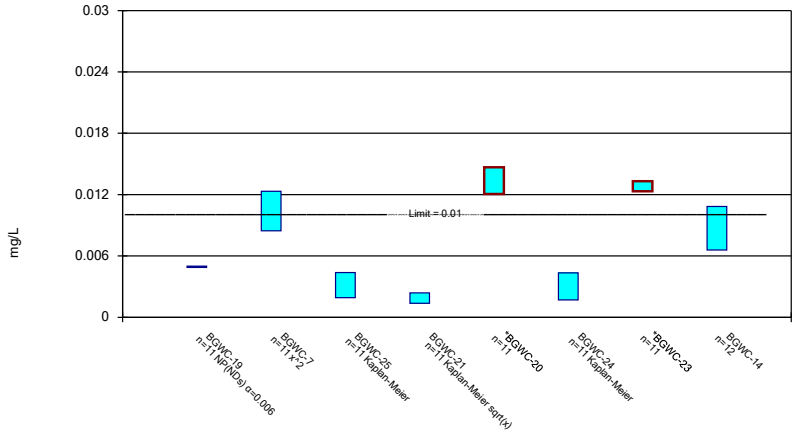
Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Molybdenum Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	<0.05	0.0079	<0.05	<0.05	0.016			
6/9/2016						0.0057	0.0074	
6/10/2016								<0.05
8/11/2016		0.0093 (J)						
8/12/2016	<0.05				0.0202 (J)			
8/15/2016			<0.05					
8/17/2016								<0.05
8/18/2016				<0.05		0.0061 (J)	0.0078 (J)	
10/6/2016		0.0102 (J)						
10/7/2016	<0.05							<0.05
10/10/2016			<0.05	<0.05	0.0194 (J)	0.006 (J)	0.0093 (J)	
12/6/2016		0.0094 (J)						
12/7/2016	<0.05				0.0265 (J)	0.0066 (J)	0.0117 (J)	
12/8/2016			<0.05	<0.05				<0.05
2/15/2017		<0.05						
2/16/2017	<0.05							
2/17/2017				<0.05	0.0253 (J)			
2/20/2017			<0.05			0.0053 (J)	0.011 (J)	
2/21/2017								<0.05
4/18/2017		0.0086 (J)						
4/19/2017	<0.05			<0.05	0.0233 (J)	0.0055 (J)	0.0105 (J)	
4/20/2017			<0.05					
4/21/2017								<0.05
6/1/2017	<0.05		<0.05	<0.05	0.023 (J)			
6/2/2017		0.0102 (J)						
6/5/2017						0.0068 (J)	0.0108 (J)	
6/6/2017								<0.05
6/15/2017								<0.05
7/14/2017	<0.05	0.0092 (J)						
7/17/2017			<0.05			<0.05	0.0095 (J)	
7/18/2017				<0.05	0.0207 (J)			
7/19/2017								<0.05
3/27/2018	<0.05	0.0087 (J)						
3/28/2018			<0.05	<0.05	0.013 (J)			
3/29/2018						0.0053 (J)	0.014 (J)	<0.05
6/13/2018		0.0084 (J)			0.02 (J)	0.0067 (J)	0.014 (J)	
6/14/2018			<0.05	<0.05				
6/15/2018	<0.05							<0.05
10/18/2018		0.0083 (J)						
10/19/2018	<0.05			<0.05				<0.05
10/22/2018			<0.05		0.016 (J)	0.0075 (J)	0.016 (J)	
Mean	0.025	0.01047	0.025	0.025	0.02031	0.007864	0.01109	0.025
Std. Dev.	0	0.004875	0	0	0.004136	0.005726	0.002684	0
Upper Lim.	0.025	0.0102	0.025	0.025	0.02376	0.0075	0.01333	0.025
Lower Lim.	0.025	0.0079	0.025	0.025	0.01686	0.0053	0.008854	0.025

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.0171 (J)
2/7/2017	0.0196 (J)
3/27/2017	0.0192 (J)
4/17/2017	0.0169 (J)
5/22/2017	0.0167 (J)
6/5/2017	0.0177 (J)
7/11/2017	0.0203 (J)
8/23/2017	0.0182 (J)
3/26/2018	0.0063 (J)
6/15/2018	0.0049 (J)
10/22/2018	0.005 (J)
Mean	0.01472
Std. Dev.	0.0061
Upper Lim.	0.01933
Lower Lim.	0.01128

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	0.0028 (J)							
6/7/2016		0.00063 (J)	<0.01	<0.01	0.0067 (J)	<0.01		
6/8/2016							0.07	<0.01
8/10/2016		0.0039 (J)						
8/11/2016	0.003 (J)		<0.01			<0.01		
8/12/2016				<0.01				<0.01
8/16/2016					0.0032 (J)			
8/18/2016							0.0758	
10/4/2016		0.0052 (J)						
10/5/2016	0.0032 (J)							
10/6/2016				<0.01				
10/7/2016			<0.01		0.0032 (J)	<0.01		<0.01
10/10/2016							0.0712	
12/2/2016		<0.01						
12/5/2016	0.0033 (J)			<0.01				
12/6/2016			<0.01		0.0049 (J)	<0.01		<0.01
12/8/2016							0.0682	
2/14/2017		0.0044 (J)						
2/15/2017	0.0027 (J)			<0.01				
2/16/2017			<0.01		0.0039 (J)	<0.01		<0.01
2/17/2017							0.066	
4/14/2017		0.0013 (J)						
4/17/2017	0.0025 (J)							
4/18/2017			<0.01	<0.01	0.0032 (J)			
4/19/2017						<0.01		<0.01
4/20/2017							0.0662	
5/26/2017	0.0029 (J)	0.0024 (J)						
5/30/2017			<0.01			<0.01		
6/1/2017								<0.01
6/2/2017				<0.01	0.0035 (J)			
6/5/2017							0.071	
7/10/2017		0.0013 (J)						
7/11/2017	0.0029 (J)							
7/12/2017					0.0037 (J)			
7/13/2017				<0.01				
7/14/2017			<0.01			<0.01		<0.01
7/19/2017							0.0703	
3/26/2018		<0.01						
3/27/2018	0.0031 (J)		<0.01		0.0032 (J)	<0.01		<0.01
3/28/2018				<0.01				
3/29/2018							0.056	
6/12/2018	0.0043 (J)	0.0026 (J)	<0.01					
6/14/2018				<0.01	0.0033 (J)	<0.01	0.059	<0.01
10/16/2018		0.0041 (J)						
10/17/2018	0.0038 (J)			<0.01		<0.01		
10/18/2018			<0.01		0.0034 (J)			<0.01
10/22/2018							0.055	
Mean	0.003136	0.003257	0.005	0.005	0.003836	0.005	0.06625	0.005
Std. Dev.	0.0005163	0.001674	0	0	0.001075	0	0.006759	0
Upper Lim.	0.003567	0.00413	0.005	0.005	0.0049	0.005	0.07188	0.005
Lower Lim.	0.002706	0.001461	0.005	0.005	0.0032	0.005	0.06061	0.005

Confidence Interval

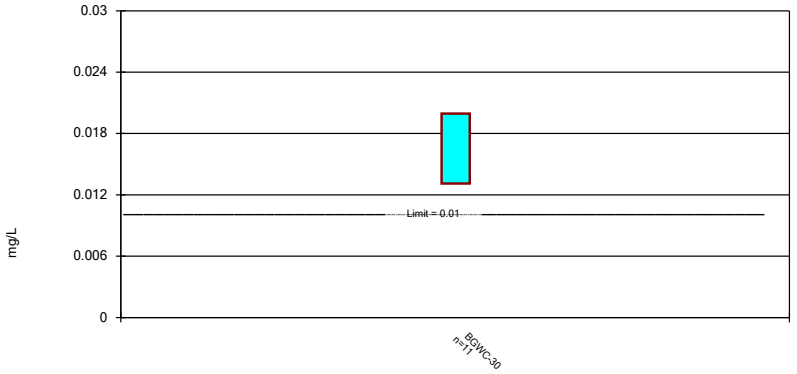
Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	<0.01	0.0088 (J)	0.0064 (J)	0.0027 (J)	0.011 (J)			
6/9/2016						0.0024 (J)	0.013 (J)	
6/10/2016								0.014 (J)
8/11/2016		0.01						
8/12/2016	<0.01				0.0127			
8/15/2016			0.0039 (J)					
8/17/2016								0.0085 (J)
8/18/2016				0.0023 (J)		0.0034 (J)	0.0136	
10/6/2016		0.0117						
10/7/2016	<0.01							0.0072 (J)
10/10/2016			0.0029 (J)	0.0025 (J)	0.0136	0.0047 (J)	0.0134	
12/6/2016		0.0102						
12/7/2016	<0.01				0.0139	0.0066 (J)	0.0128	
12/8/2016			<0.01	<0.01				0.0082 (J)
2/15/2017		0.0018 (J)						
2/16/2017	<0.01							
2/17/2017				<0.01	0.0148			
2/20/2017			0.0024 (J)			0.0026 (J)	0.0122	
2/21/2017								0.0076 (J)
4/18/2017		0.0103						
4/19/2017	<0.01			0.0014 (J)	0.012	0.002 (J)	0.0124	
4/20/2017			0.0019 (J)					
4/21/2017								0.0052 (J)
6/1/2017	<0.01		0.0026 (J)	0.0012 (J)	0.0125			
6/2/2017		0.0129						
6/5/2017						0.0015 (J)	0.0115	
6/6/2017								0.0079 (J)
6/15/2017								0.0052 (J)
7/14/2017	<0.01	0.0129						
7/17/2017			0.0024 (J)			0.0013 (J)	0.0131	
7/18/2017				0.0013 (J)	0.0155			
7/19/2017								0.0073 (J)
3/27/2018	<0.01	0.01						
3/28/2018			<0.01	<0.01	0.012			
3/29/2018						0.0027 (J)	0.013	0.012
6/13/2018		0.013			0.016	<0.01	0.013	
6/14/2018			<0.01	<0.01				
6/15/2018	<0.01							0.012
10/18/2018		0.01 (J)						
10/19/2018	<0.01			<0.01				0.0094 (J)
10/22/2018			<0.01		0.013	<0.01	0.013	
Mean	0.005	0.01015	0.003864	0.003309	0.01336	0.003382	0.01282	0.008708
Std. Dev.	0	0.003119	0.001492	0.001687	0.001567	0.001708	0.0005879	0.002717
Upper Lim.	0.005	0.01233	0.00437	0.002394	0.01467	0.004347	0.01331	0.01084
Lower Lim.	0.005	0.008457	0.001916	0.001375	0.01206	0.001697	0.01233	0.006576

Parametric Confidence Interval

Compliance limit is exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

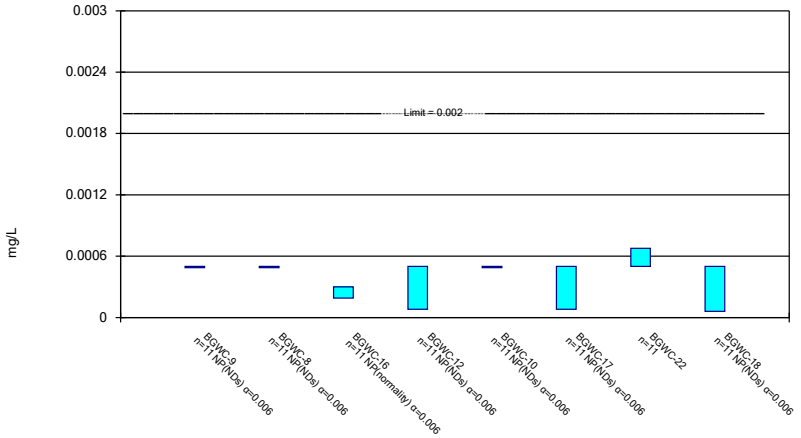


Constituent: Molybdenum Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

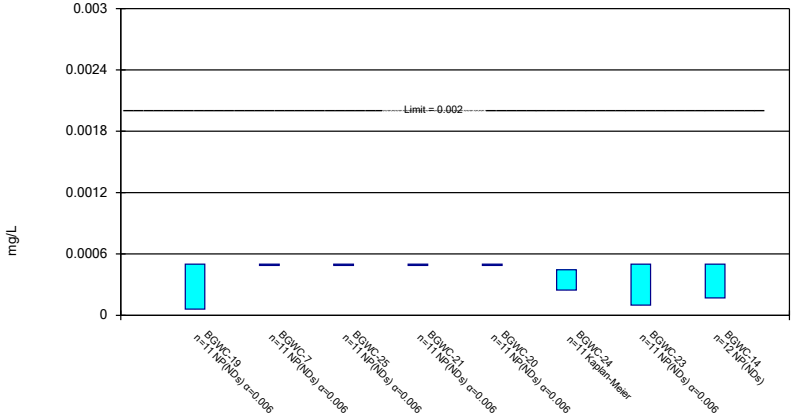


Constituent: Thallium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

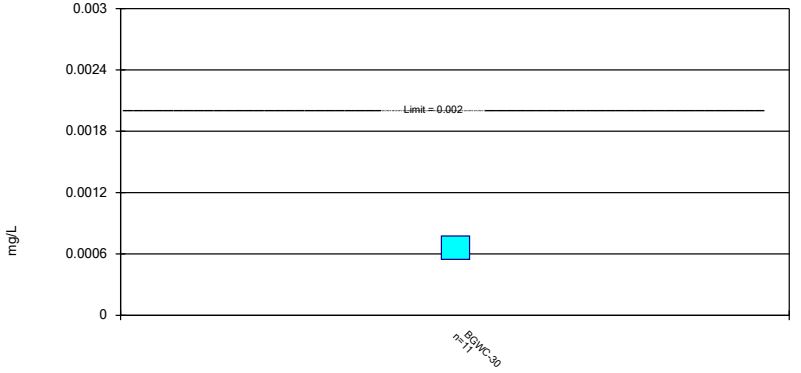


Constituent: Thallium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Thallium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.0125
2/7/2017	0.0163
3/27/2017	0.0157
4/17/2017	0.0178
5/22/2017	0.0208
6/5/2017	0.0191
7/11/2017	0.0218
8/23/2017	0.0218
3/26/2018	0.014
6/15/2018	0.012
10/22/2018	0.01
Mean	0.01653
Std. Dev.	0.004105
Upper Lim.	0.01995
Lower Lim.	0.01311

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	<0.001							
6/7/2016		<0.001	0.0002 (J)	<0.001	<0.001	8.5E-05 (J)		
6/8/2016							0.00035 (J)	<0.001
8/10/2016		<0.001						
8/11/2016	<0.001		0.0002 (J)			8E-05 (J)		
8/12/2016				9E-05 (J)				6E-05 (J)
8/16/2016					<0.001			
8/18/2016							0.0005 (J)	
10/4/2016		<0.001						
10/5/2016	<0.001							
10/6/2016				<0.001				
10/7/2016			0.0002 (J)		<0.001	<0.001		<0.001
10/10/2016							0.0006 (J)	
12/2/2016		<0.001						
12/5/2016	<0.001			<0.001				
12/6/2016			0.0003 (J)		<0.001	<0.001		<0.001
12/8/2016							0.0005 (J)	
2/14/2017		<0.001						
2/15/2017	<0.001			<0.001				
2/16/2017			0.0003 (J)		<0.001	<0.001		<0.001
2/17/2017							0.0006 (J)	
4/14/2017		<0.001						
4/17/2017	<0.001							
4/18/2017			0.0002 (J)	9E-05 (J)	<0.001			
4/19/2017						8E-05 (J)		<0.001
4/20/2017							0.0006 (J)	
5/26/2017	<0.001	<0.001						
5/30/2017			0.0002 (J)			9E-05 (J)		
6/1/2017								<0.001
6/2/2017				<0.001	<0.001			
6/5/2017							0.0006 (J)	
7/10/2017		<0.001						
7/11/2017	<0.001							
7/12/2017					<0.001			
7/13/2017				8E-05 (J)				
7/14/2017			0.0002 (J)			9E-05 (J)		<0.001
7/19/2017							0.0007 (J)	
3/26/2018		<0.001						
3/27/2018	<0.001		0.00019 (J)		<0.001	<0.001		<0.001
3/28/2018				<0.001				
3/29/2018							0.00063 (J)	
6/12/2018	<0.001	<0.001	0.0002 (J)					
6/14/2018				<0.001	<0.001	<0.001	0.00069 (J)	<0.001
10/16/2018		<0.001						
10/17/2018	<0.001			<0.001		<0.001		
10/18/2018			0.0002 (J)		<0.001			<0.001
10/22/2018							0.00071 (J)	
Mean	0.0005	0.0005	0.0002173	0.0003873	0.0005	0.0003114	0.0005891	0.00046
Std. Dev.	0	0	4.101E-05	0.0001931	0	0.0002167	0.000106	0.0001327
Upper Lim.	0.0005	0.0005	0.0003	0.0005	0.0005	0.0005	0.0006774	0.0005
Lower Lim.	0.0005	0.0005	0.00019	8E-05	0.0005	8E-05	0.0005008	6E-05

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	8.5E-05 (J)	<0.001	<0.001	<0.001	<0.001			
6/9/2016						0.00022 (J)	0.0001 (J)	
6/10/2016								<0.001
8/11/2016		<0.001						
8/12/2016	8E-05 (J)				<0.001			
8/15/2016			<0.001					
8/17/2016								<0.001
8/18/2016				<0.001		<0.001	<0.001	
10/6/2016		<0.001						
10/7/2016	<0.001							<0.001
10/10/2016			<0.001	<0.001	<0.001	0.0003 (J)	<0.001	
12/6/2016		<0.001						
12/7/2016	<0.001				<0.001	<0.001	<0.001	
12/8/2016			<0.001	<0.001				<0.001
2/15/2017		<0.001						
2/16/2017	<0.001							
2/17/2017				<0.001	<0.001			
2/20/2017			<0.001			0.0003 (J)	<0.001	
2/21/2017								<0.001
4/18/2017		<0.001						
4/19/2017	6E-05 (J)			<0.001	<0.001	0.0004 (J)	<0.001	
4/20/2017			<0.001					
4/21/2017								<0.001
6/1/2017	8E-05 (J)		<0.001	<0.001	<0.001			
6/2/2017		<0.001						
6/5/2017						0.0004 (J)	<0.001	
6/6/2017								<0.001
6/15/2017								<0.001
7/14/2017	8E-05 (J)	<0.001						
7/17/2017			<0.001			0.0004 (J)	<0.001	
7/18/2017				<0.001	<0.001			
7/19/2017								<0.001
3/27/2018	<0.001	<0.001						
3/28/2018			<0.001	<0.001	<0.001			
3/29/2018						0.00048 (J)	<0.001	<0.001
6/13/2018		<0.001			<0.001	0.00053 (J)	<0.001	
6/14/2018			<0.001	<0.001				
6/15/2018	<0.001							<0.001
10/18/2018		<0.001						
10/19/2018	<0.001			<0.001				0.00017 (J)
10/22/2018			<0.001		<0.001	0.00047 (J)	<0.001	
Mean	0.0003077	0.0005	0.0005	0.0005	0.0005	0.0004091	0.0004636	0.0004725
Std. Dev.	0.000221	0	0	0	0	9.985E-05	0.0001206	9.526E-05
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004447	0.0005	0.0005
Lower Lim.	6E-05	0.0005	0.0005	0.0005	0.0005	0.0002471	0.0001	0.00017

Confidence Interval

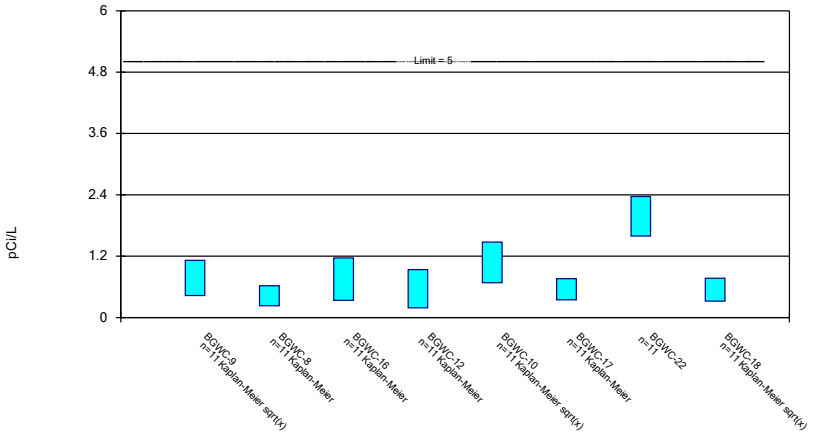
Constituent: Thallium (mg/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	0.0008 (J)
2/7/2017	0.0008 (J)
3/27/2017	0.0006 (J)
4/17/2017	0.0007 (J)
5/22/2017	0.0008 (J)
6/5/2017	0.0007 (J)
7/11/2017	0.0007 (J)
8/23/2017	0.0007 (J)
3/26/2018	0.00058 (J)
6/15/2018	0.00056 (J)
10/22/2018	0.00034 (J)
Mean	0.0006618
Std. Dev.	0.000137
Upper Lim.	0.0007759
Lower Lim.	0.0005477

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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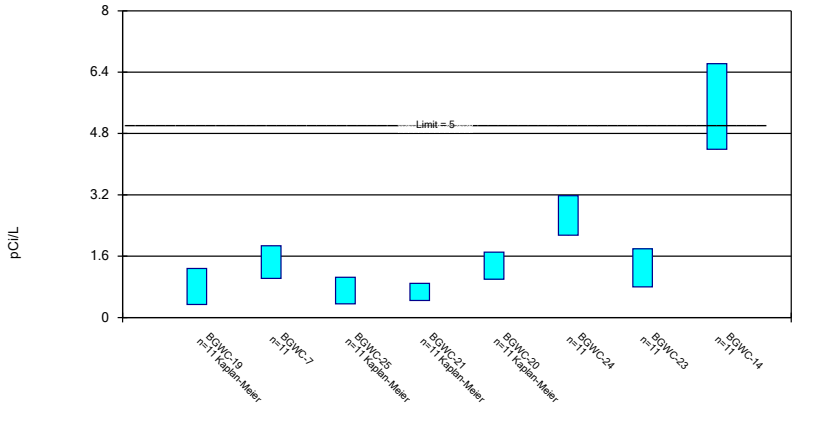
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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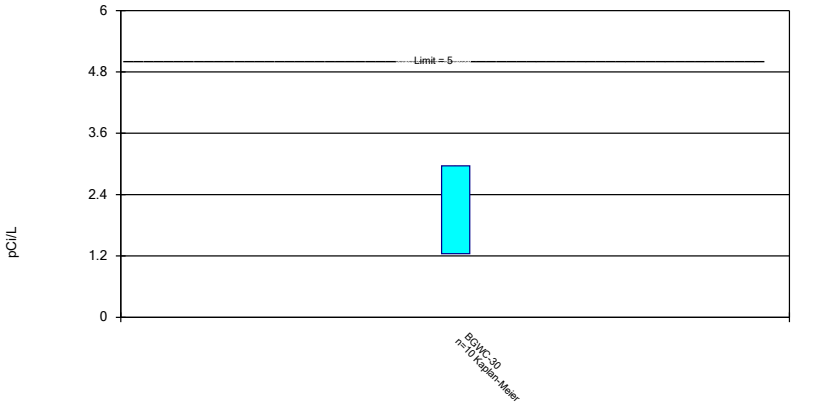
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 12/19/2018 5:05 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18
6/6/2016	0.488							
6/7/2016		<1.04	<1.04	<1.04	0.616	<1.04		
6/8/2016							1.53	0.406
8/10/2016		0.862						
8/11/2016	0.639		1.71			0.808		
8/12/2016				0.849				1.39
8/16/2016					1.08			
8/18/2016							2.47	
10/4/2016		0.48						
10/5/2016	0.945							
10/6/2016				1.57				
10/7/2016			0.485		2.82	0.874		0.451
10/10/2016							2.11	
12/2/2016		0.219						
12/5/2016	2.2			0.956				
12/6/2016			1.22		0.719	0.131		0.516
12/8/2016							2.64	
2/14/2017		0.636						
2/15/2017	0.74			0.229				
2/16/2017			0.19		0.966	0.471		0.172
2/17/2017							1.34	
4/14/2017		0.13						
4/17/2017	0.764							
4/18/2017			0.52	0.0114	1.01			
4/19/2017						0.65		0.704
4/20/2017							2.35	
5/26/2017	0.245	0.349						
5/30/2017			1.21			0.65		
6/1/2017								0.493
6/2/2017				0.375	1.13			
6/5/2017							1.6	
7/10/2017		<1.04						
7/11/2017	<1.04							
7/12/2017					1.29			
7/13/2017				<1.04				
7/14/2017			<1.04			<1.04		<1.04
7/19/2017							1.76	
3/26/2018		0.303						
3/27/2018	0.745		1.34		0.779	0.551		0.569
3/28/2018				0.36				
3/29/2018							2.43	
6/12/2018	<1.04	<1.04	<1.04					
6/14/2018				<1.04	<1.04	<1.04	2.14 (J)	<1.04
10/16/2018		<1.04						
10/17/2018	<1.04			<1.04		<1.04		
10/18/2018			<1.04		<1.04			<1.04
10/22/2018							1.43 (J)	
Mean	0.7569	0.4599	0.7959	0.5846	1.041	0.565	1.982	0.5692
Std. Dev.	0.5133	0.2028	0.4824	0.4177	0.6433	0.1935	0.4653	0.301
Upper Lim.	1.12	0.6219	1.166	0.9391	1.475	0.7578	2.37	0.7694
Lower Lim.	0.4308	0.2292	0.3372	0.1889	0.6821	0.3477	1.594	0.3223

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-19	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14
6/8/2016	<1.04	0.854	<1.04	0.573	<1.04			
6/9/2016						2.13	0.704	
8/11/2016		1.24						
8/12/2016	1.18				1.74			
8/15/2016			1.2					
8/17/2016								5.18
8/18/2016				0.44		2.67	1.88	
10/6/2016		2.43						
10/7/2016	1.97							
10/10/2016			1.03	0.933	0.944	3.46	1.48	
12/6/2016		0.958						
12/7/2016	1.31				2.29	1.65	2.61	
12/8/2016			1.47	1.02				
2/15/2017		1.18						
2/16/2017	0.35							
2/17/2017				0.193	1.35			
2/20/2017			0.547			2.68	0.884	
2/21/2017								5.1
4/18/2017		1.26						
4/19/2017	0.974			0.488	1.48	3.81	0.948	
4/20/2017			0.0595					
5/26/2017								7.14
6/1/2017	0.332		0.67	0.837	1.61			
6/2/2017		1.24						
6/5/2017						2.86	1.33	
6/6/2017								4.68
6/15/2017								5.69
7/12/2017								2.92
7/14/2017	1.27	1.55						
7/17/2017			<1.04			2.87	1.04	
7/18/2017				<1.04				
7/19/2017					1.626			
8/10/2017								6.51
8/25/2017								7.04
3/27/2018	0.169	2.15						
3/28/2018			0.507	0.864	0.97			
3/29/2018						2.79	1.65	6.35
6/13/2018		1.95 (J)			<1.04	2.19 (J)	<1.04	
6/14/2018			<1.04	<1.04				
6/15/2018	<1.04							6.2 (J)
10/18/2018		1.1 (J)						
10/19/2018	<1.04			<1.04				3.76 (J)
10/22/2018			<1.04		<1.04	2.18 (J)	1.21 (J)	
Mean	0.8286	1.447	0.6876	0.628	1.234	2.663	1.296	5.506
Std. Dev.	0.5541	0.5126	0.3939	0.2506	0.5851	0.6178	0.5953	1.34
Upper Lim.	1.28	1.874	1.048	0.8929	1.705	3.178	1.792	6.623
Lower Lim.	0.3425	1.019	0.3579	0.4441	1	2.148	0.7999	4.39

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 5:07 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-30
1/23/2017	2.71
2/7/2017	3
4/17/2017	2.73
5/22/2017	3.15 (D)
6/5/2017	0.86
7/11/2017	1.87
8/23/2017	3.39
3/26/2018	1.61 (U*)
6/15/2018	<1.04
10/22/2018	<1.04
Mean	2.036
Std. Dev.	1.112
Upper Lim.	2.962
Lower Lim.	1.246

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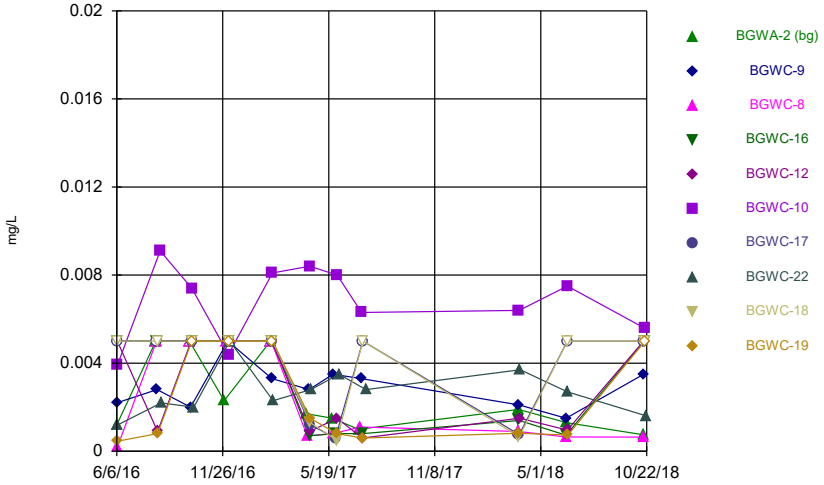
Time Series

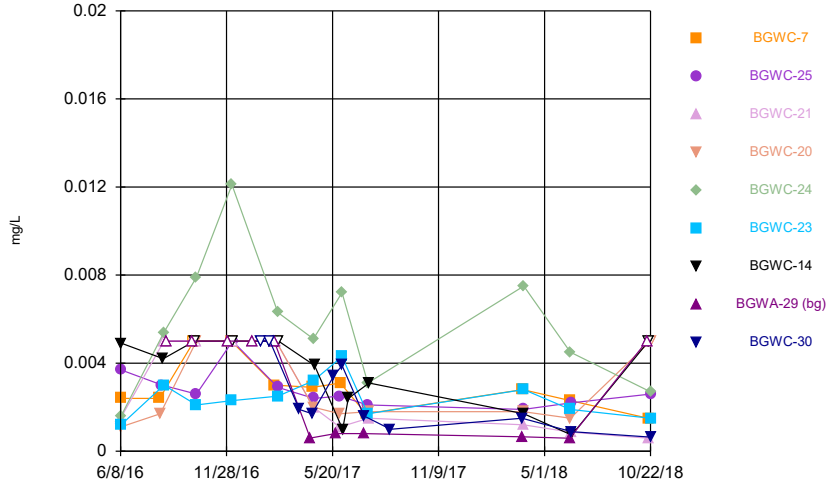


Constituent: Arsenic Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

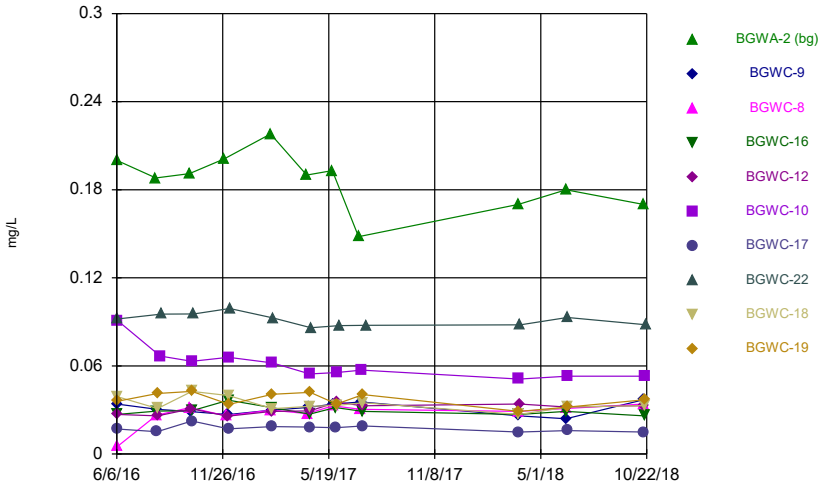


Constituent: Arsenic Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

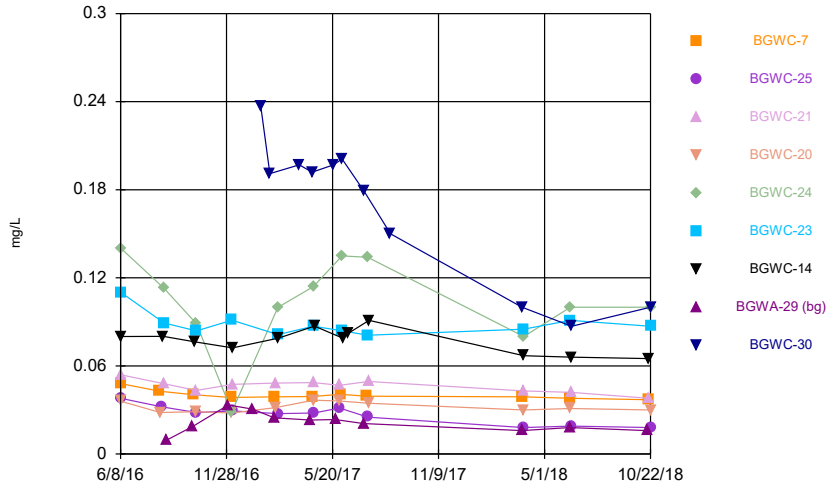


Constituent: Barium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Time Series

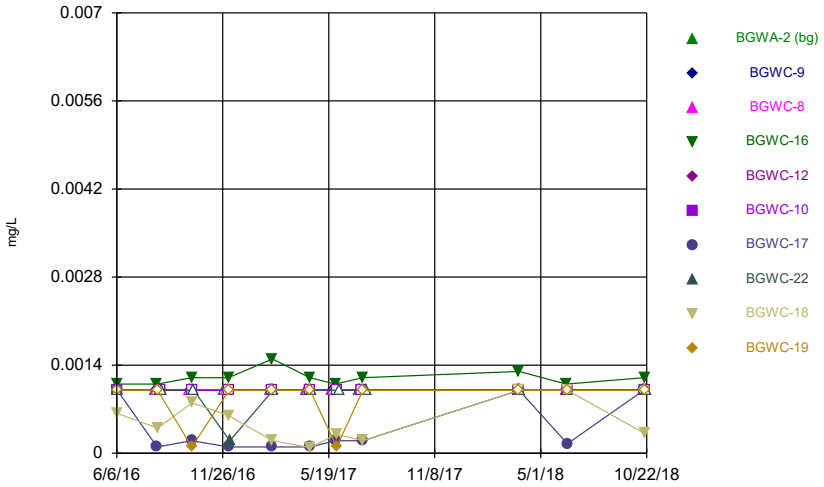


Constituent: Barium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

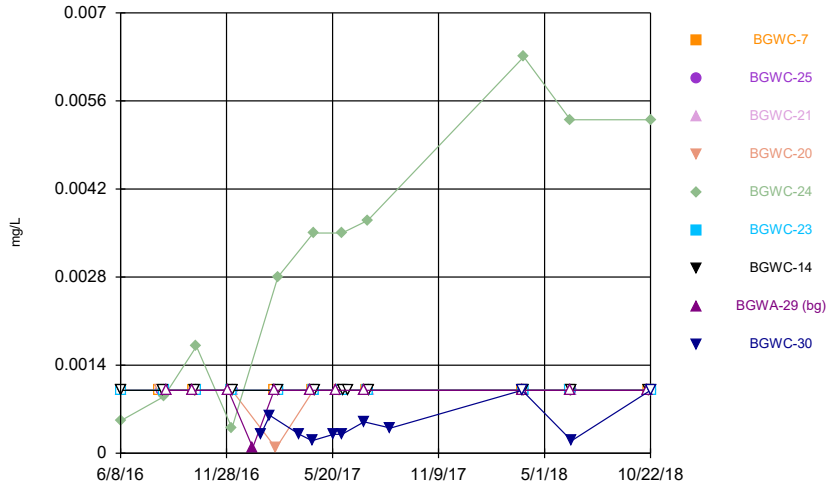


Constituent: Cadmium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

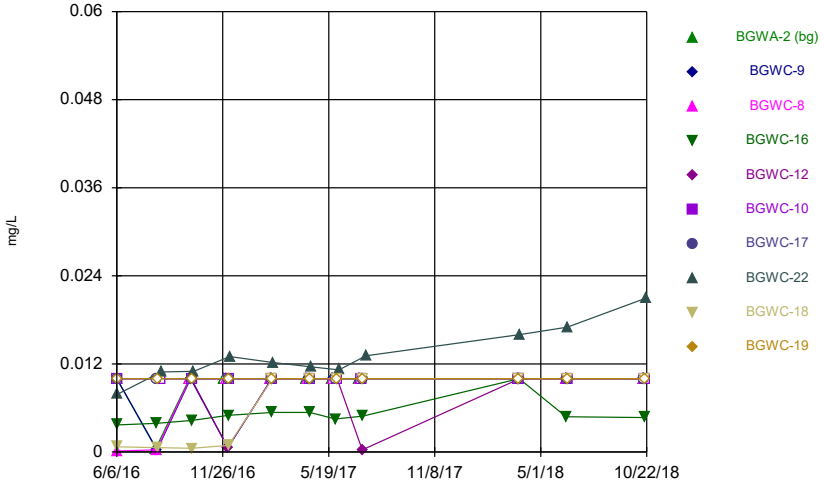


Constituent: Cadmium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

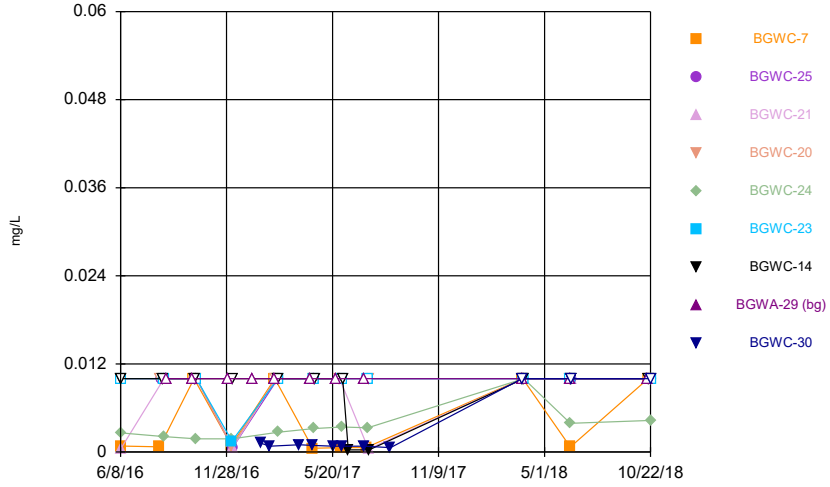


Constituent: Cobalt Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

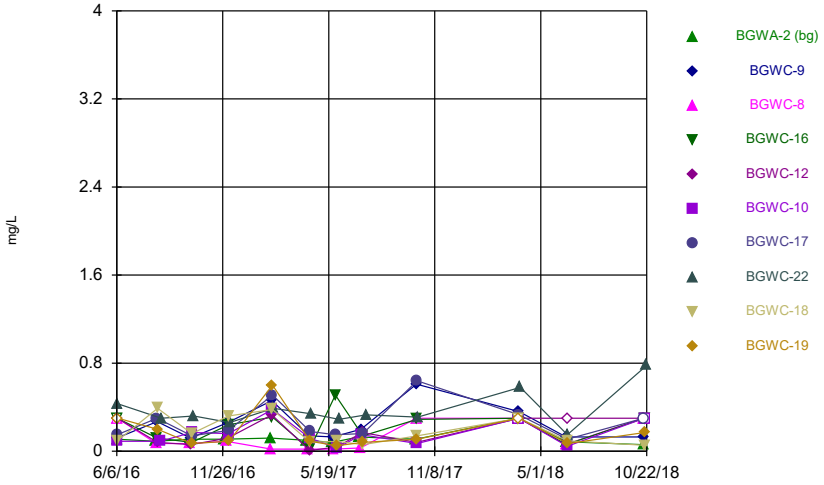


Constituent: Cobalt Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

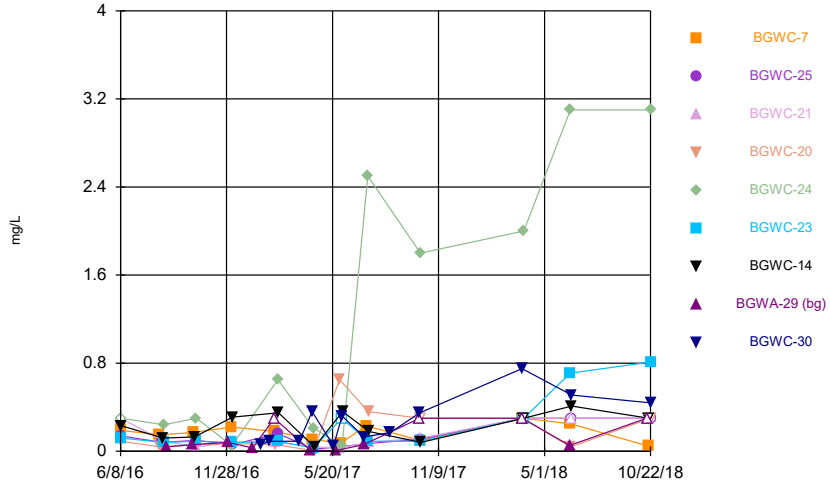


Constituent: Fluoride Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

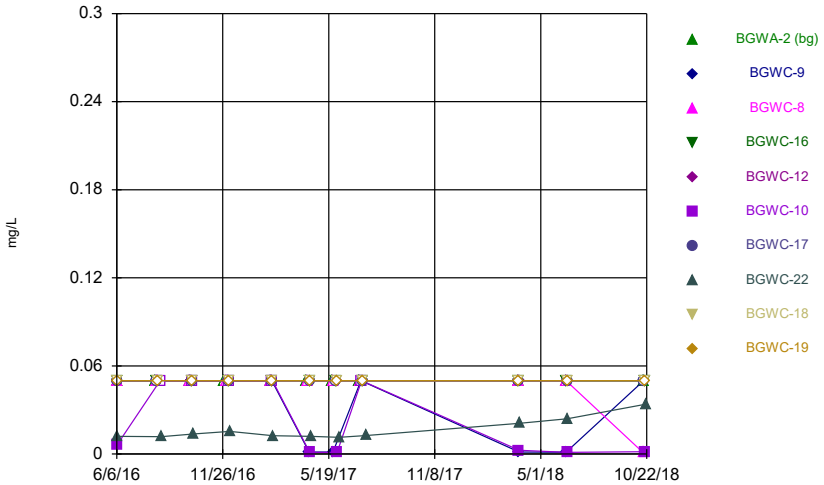


Constituent: Fluoride Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

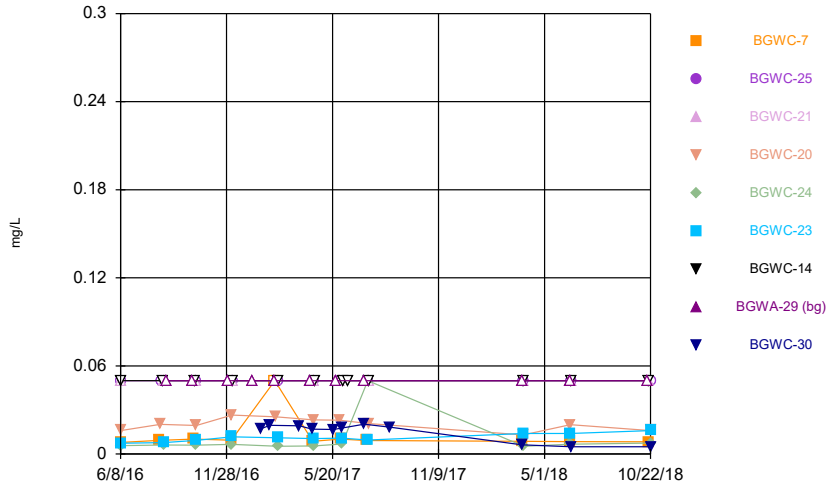


Constituent: Lithium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

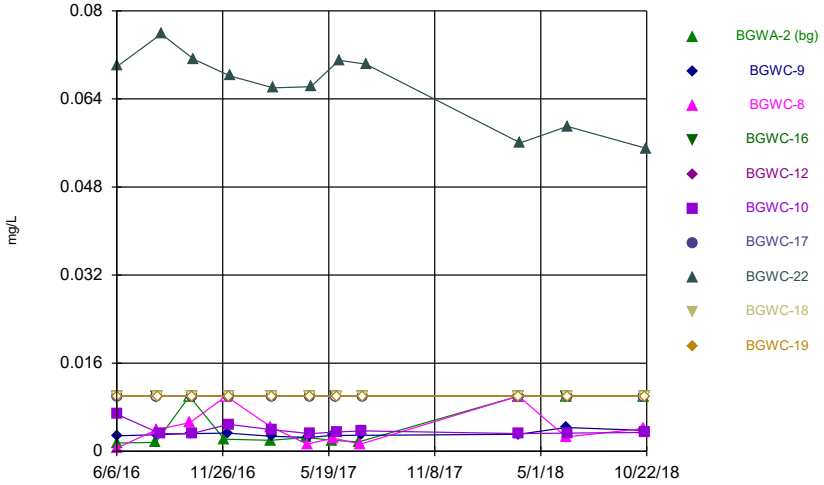


Constituent: Lithium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

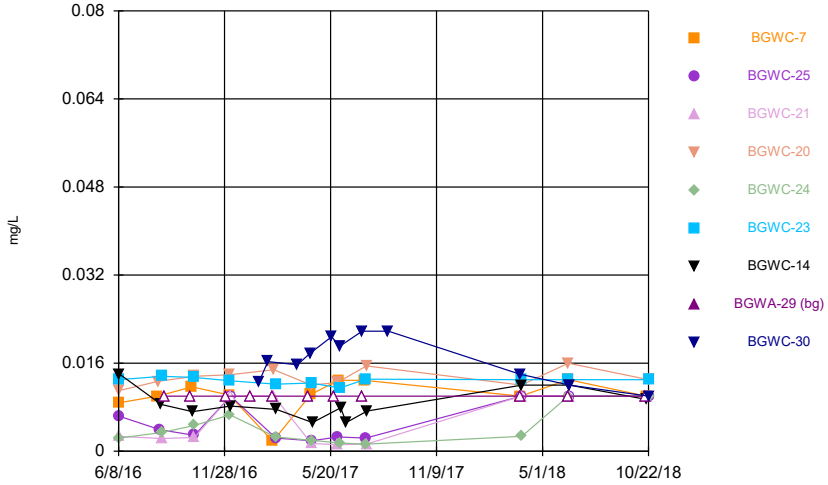


Constituent: Molybdenum Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

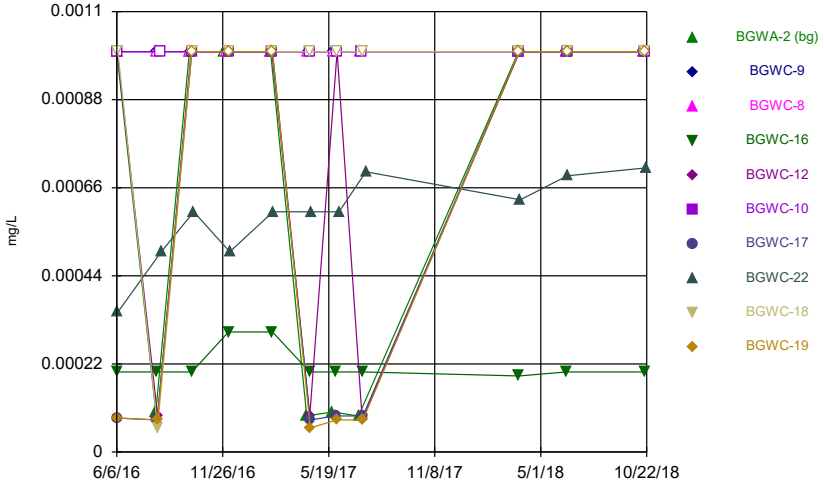


Constituent: Molybdenum Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

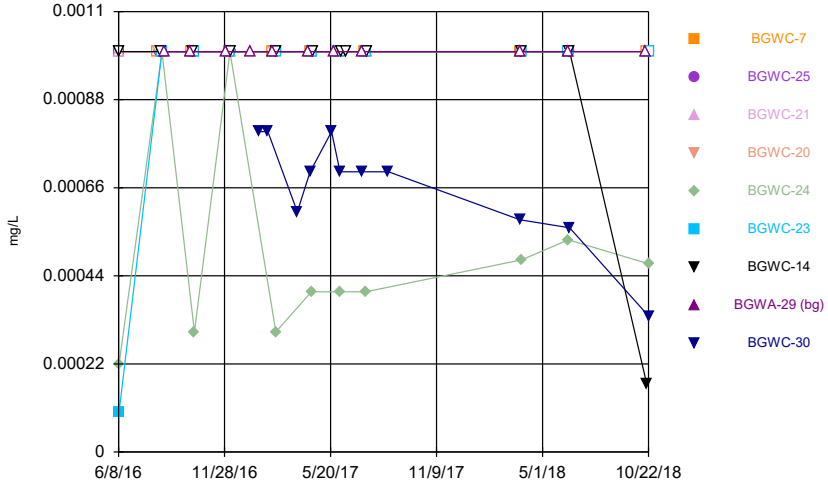


Constituent: Thallium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

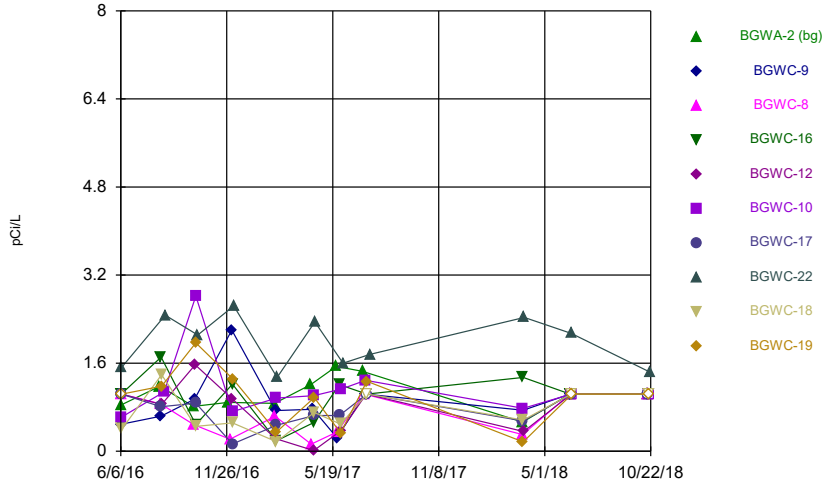


Constituent: Thallium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

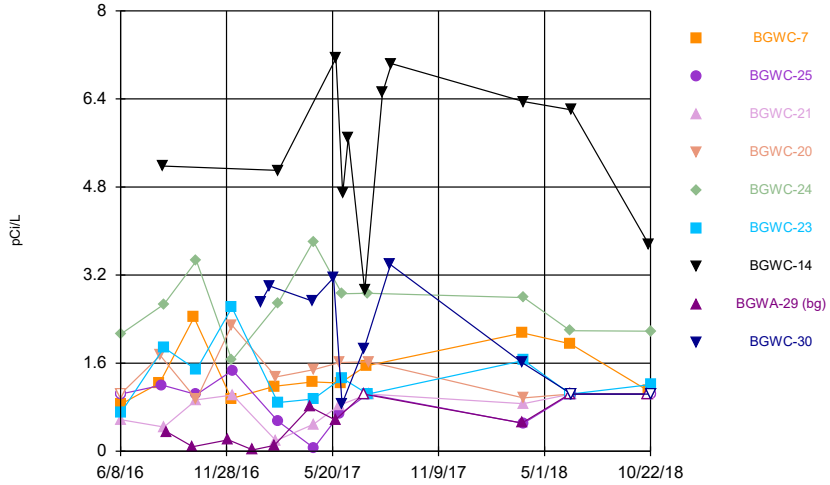


Constituent: Total Radium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



Constituent: Total Radium Analysis Run 12/19/2018 5:08 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

USEPA Based Groundwater Protection Standards Statistical Analysis Package

AM 02

Table B-2
USEPA Based Groundwater Protection Standards
Plant Bowen - Ash Pond 1
Bartow County, Georgia
AM 02

Constituent	CAS	Units	EPA MCL	Statistically Derived Upper Tolerance Limit for Background	GWPS[1]
Antimony	7440-36-0	mg/L	0.006	0.003	0.006
Arsenic	7440-38-2	mg/L	0.01	0.005	0.01
Barium	7440-39-3	mg/L	2	0.218	2
Beryllium	7440-41-7	mg/L	0.004	0.003	0.004
Cadmium	7440-43-9	mg/L	0.005	0.001	0.005
Chromium (III+VI)	7440-47-3	mg/L	0.1	0.01	0.1
Cobalt[2]	7440-48-4	mg/L	0.006	0.005	0.006
Fluoride	16984-48-8	mg/L	4	0.191	4
Lead[3]	7439-92-1	mg/L	0.015	0.005	0.015
Lithium[2]	7439-93-2	mg/L	0.04	0.025	0.04
Mercury	7439-97-6	mg/L	0.002	0.0005	0.002
Molybdenum[2]	7439-98-7	mg/L	0.1	0.01	0.1
Selenium	7782-49-2	mg/L	0.05	0.01	0.05
Thallium	7440-28-0	mg/L	0.002	0.001	0.002
Total Radium	7440-14-4	pCi/L	5	1.675	5

Notes:

- = Not applicable

EPA MCL - U.S. Environmental Protection Agency, Maximum Contaminant Level

GWPS - Groundwater Protection Standards

mg/L - milligram per liter

N/A - Not Available

pCi/L - Picocuries per liter

[1]GWPS selected as the greater value between the EPA MCL and the background Upper Tolerance Limit.

[2]Regional Screening Level applied for constituent per CCR Rule Ammendment, July 30, 2018.

[3]Currently, there is no EPA MCL established for lead. The value listed is the established EPA Action Level for drinking water.

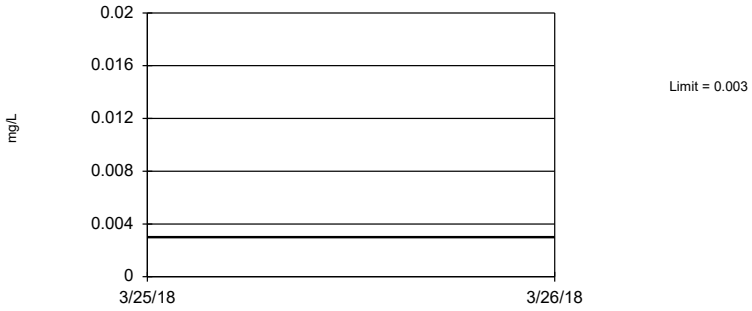
Tolerance Limit

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:25 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	22	40.91	n/a	0.3235	NP Inter(normal...
Barium (mg/L)	n/a	0.218	n/a	n/a	n/a	22	0	n/a	0.3235	NP Inter(normal...
Beryllium (mg/L)	n/a	0.003	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	22	95.45	n/a	0.3235	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	66.67	n/a	0.3972	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	22	95.45	n/a	0.3235	NP Inter(NDs)
Fluoride (mg/L)	n/a	0.191	n/a	n/a	n/a	24	20.83	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.005	n/a	n/a	n/a	18	88.89	n/a	0.3972	NP Inter(NDs)
Lithium (mg/L)	n/a	0.025	n/a	n/a	n/a	22	100	n/a	0.3235	NP Inter(NDs)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	22	68.18	n/a	0.3235	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	n/a	n/a	n/a	18	100	n/a	0.3972	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	22	81.82	n/a	0.3235	NP Inter(NDs)
Total Radium (pCi/L)	n/a	1.675	n/a	n/a	n/a	22	22.73	No	0.05	Inter

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 77.54% coverage at alpha=0.01; 84.57% coverage at alpha=0.05; 96.29% coverage at alpha=0.5. Report alpha = 0.3972.

Constituent: Antimony Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric

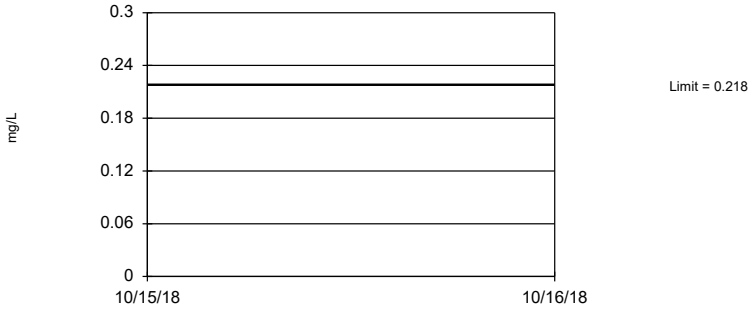
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 22 background values. 40.91% NDs. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Arsenic Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



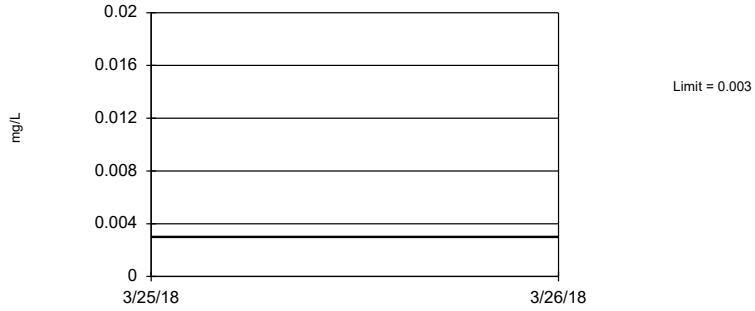
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 22 background values. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Barium Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 77.54% coverage at alpha=0.01; 84.57% coverage at alpha=0.05; 96.29% coverage at alpha=0.5. Report alpha = 0.3972.

Constituent: Beryllium Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Constituent: Antimony (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.003	
8/9/2016	<0.003	
8/22/2016		<0.003
10/3/2016	<0.003	
10/4/2016		<0.003
11/29/2016	<0.003	
12/1/2016		<0.003
1/10/2017		<0.003
2/13/2017	<0.003	
2/14/2017		<0.003
4/13/2017	<0.003 (*)	
4/14/2017		<0.003
5/25/2017	<0.003	<0.003
7/7/2017	<0.003	
7/10/2017		<0.003
3/26/2018	<0.003	<0.003

Tolerance Limit

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	0.0012 (J)	
8/9/2016	<0.005	
8/22/2016		<0.005
10/3/2016	<0.005	
10/4/2016		<0.005
11/29/2016	0.0023 (J)	
12/1/2016		<0.005
1/10/2017		<0.005
2/13/2017	<0.005	
2/14/2017		<0.005
4/13/2017	0.0017 (J)	
4/14/2017		0.0006 (J)
5/25/2017	0.0015 (J)	0.0008 (J)
7/7/2017	0.001 (J)	
7/10/2017		0.0008 (J)
3/26/2018	0.0019 (U*)	0.00066 (U*)
6/12/2018	0.0013 (J)	0.00059 (J)
10/16/2018	0.00075 (J)	<0.005

Tolerance Limit

Constituent: Barium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	0.2	
8/9/2016	0.188	
8/22/2016		0.0094 (J)
10/3/2016	0.191	
10/4/2016		0.0188
11/29/2016	0.201	
12/1/2016		0.0334
1/10/2017		0.0306
2/13/2017	0.218	
2/14/2017		0.0247
4/13/2017	0.19	
4/14/2017		0.0231
5/25/2017	0.193	0.0235
7/7/2017	0.148	
7/10/2017		0.0207
3/26/2018	0.17	0.016
6/12/2018	0.18	0.018
10/16/2018	0.17	0.016

Tolerance Limit

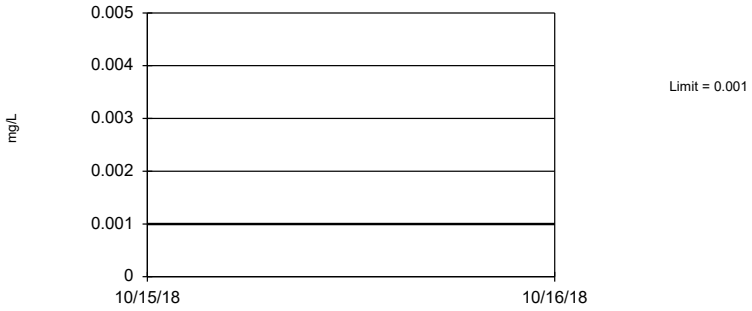
Constituent: Beryllium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.003	
8/9/2016	<0.003	
8/22/2016		<0.003
10/3/2016	<0.003	
10/4/2016		<0.003
11/29/2016	<0.003	
12/1/2016		<0.003
1/10/2017		<0.003
2/13/2017	<0.003	
2/14/2017		<0.003
4/13/2017	<0.003	
4/14/2017		<0.003
5/25/2017	<0.003	<0.003
7/7/2017	<0.003	
7/10/2017		<0.003
3/26/2018	<0.003	<0.003

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 22 background values. 95.45% NDs. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Cadmium Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric

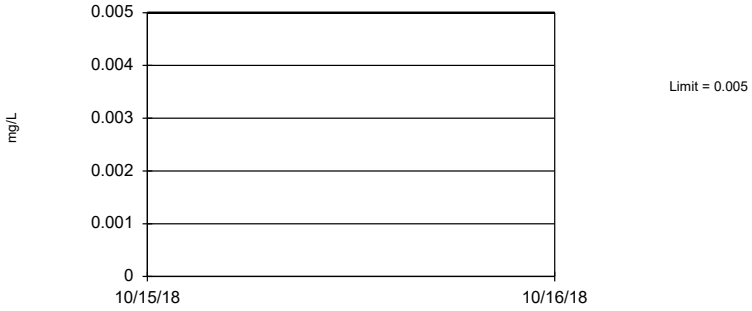
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 18 background values. 66.67% NDs. 77.54% coverage at alpha=0.01; 84.57% coverage at alpha=0.05; 96.29% coverage at alpha=0.5. Report alpha = 0.3972.

Constituent: Chromium Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



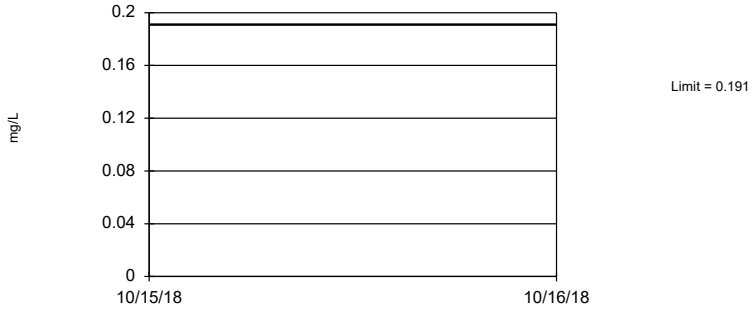
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 22 background values. 95.45% NDs. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Cobalt Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2287, Std. Dev.=0.09023, n=24, 20.83% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8995, critical = 0.884. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.001	
8/9/2016	<0.001	
8/22/2016		<0.001
10/3/2016	<0.001	
10/4/2016		<0.001
11/29/2016	<0.001	
12/1/2016		<0.001
1/10/2017		9E-05 (J)
2/13/2017	<0.001	
2/14/2017		<0.001
4/13/2017	<0.001	
4/14/2017		<0.001
5/25/2017	<0.001	<0.001
7/7/2017	<0.001	
7/10/2017		<0.001
3/26/2018	<0.001	<0.001
6/12/2018	<0.001	<0.001
10/16/2018	<0.001	<0.001

Tolerance Limit

Constituent: Chromium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.01	
8/9/2016	<0.01 (*)	
8/22/2016		<0.01
10/3/2016	<0.01	
10/4/2016		0.0013 (J)
11/29/2016	<0.01	
12/1/2016		<0.01
1/10/2017		<0.01
2/13/2017	<0.01	
2/14/2017		<0.01
4/13/2017	0.0005 (J)	
4/14/2017		0.0005 (J)
5/25/2017	<0.01	0.0004 (J)
7/7/2017	0.0008 (J)	
7/10/2017		0.0005 (J)
3/26/2018	<0.01	<0.01

Tolerance Limit

Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.005	
8/9/2016	0.0005 (J)	
8/22/2016		<0.005
10/3/2016	<0.005	
10/4/2016		<0.005
11/29/2016	<0.005	
12/1/2016		<0.005
1/10/2017		<0.005
2/13/2017	<0.005	
2/14/2017		<0.005
4/13/2017	<0.005	
4/14/2017		<0.005
5/25/2017	<0.005	<0.005
7/7/2017	<0.005	
7/10/2017		<0.005
3/26/2018	<0.005	<0.005
6/12/2018	<0.005	<0.005
10/16/2018	<0.005	<0.005

Tolerance Limit

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	0.11 (J)	
8/9/2016	0.09 (J)	
8/22/2016		0.04 (J)
10/3/2016	0.11 (J)	
10/4/2016		0.06 (J)
11/29/2016	0.11 (J)	
12/1/2016		0.08 (J)
1/10/2017		0.03 (J)
2/13/2017	0.12 (J)	
2/14/2017		<0.3
4/13/2017	0.1 (J)	
4/14/2017		0.01 (J)
5/25/2017	0.08 (J)	0.005 (J)
7/7/2017	0.13 (J)	
7/10/2017		0.06 (J)
10/9/2017	0.11 (J)	
10/10/2017		<0.3
3/26/2018	<0.3	<0.3
6/12/2018	0.086 (J)	0.053 (J)
10/16/2018	0.06 (J)	<0.3

Tolerance Limit

Interwell Non-parametric

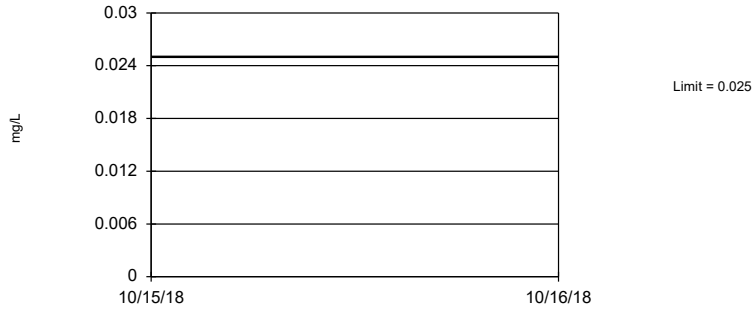
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 18 background values. 88.89% NDs. 77.54% coverage at alpha=0.01; 84.57% coverage at alpha=0.05; 96.29% coverage at alpha=0.5. Report alpha = 0.3972.

Constituent: Lead Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



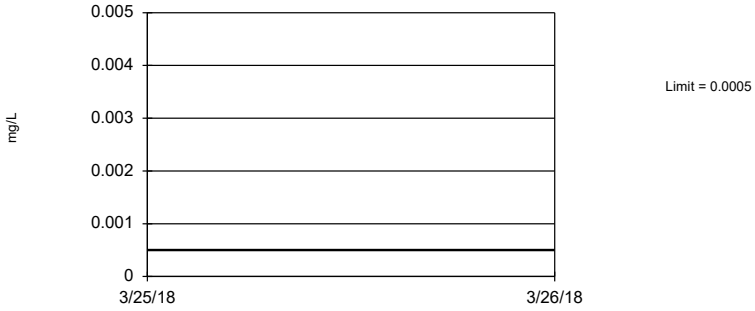
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Lithium Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



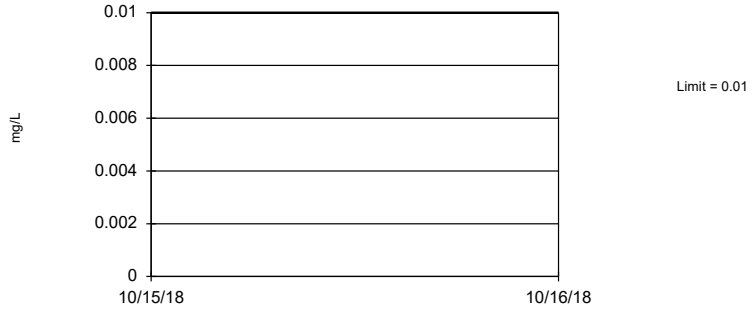
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 77.54% coverage at alpha=0.01; 84.57% coverage at alpha=0.05; 96.29% coverage at alpha=0.5. Report alpha = 0.3972.

Constituent: Mercury Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 22 background values. 68.18% NDs. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Molybdenum Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Constituent: Lead (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	0.0024	
8/9/2016	<0.005	
8/22/2016		<0.005
10/3/2016	<0.005	
10/4/2016		<0.005
11/29/2016	<0.005	
12/1/2016		<0.005
1/10/2017		<0.005
2/13/2017	<0.005	
2/14/2017		<0.005
4/13/2017	<0.005	
4/14/2017		<0.005
5/25/2017	0.0001 (J)	<0.005
7/7/2017	<0.005	
7/10/2017		<0.005
3/26/2018	<0.005	<0.005

Tolerance Limit

Constituent: Lithium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.025	
8/9/2016	<0.025	
8/22/2016		<0.025
10/3/2016	<0.025	
10/4/2016		<0.025
11/29/2016	<0.025	
12/1/2016		<0.025
1/10/2017		<0.025
2/13/2017	<0.025	
2/14/2017		<0.025
4/13/2017	<0.025	
4/14/2017		<0.025
5/25/2017	<0.025	<0.025
7/7/2017	<0.025	
7/10/2017		<0.025
3/26/2018	<0.025	<0.025
6/12/2018	<0.025	<0.025
10/16/2018	<0.025	<0.025

Tolerance Limit

Constituent: Mercury (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.0005 (*)	
8/9/2016	<0.0005	
8/22/2016		<0.0005
10/3/2016	<0.0005	
10/4/2016		<0.0005
11/29/2016	<0.0005	
12/1/2016		<0.0005
1/10/2017		<0.0005
2/13/2017	<0.0005	
2/14/2017		<0.0005
4/13/2017	<0.0005	
4/14/2017		<0.0005
5/25/2017	<0.0005	<0.0005
7/7/2017	<0.0005	
7/10/2017		<0.0005
3/26/2018	<0.0005	<0.0005

Tolerance Limit

Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	0.0015 (J)	
8/9/2016	0.0016 (J)	
8/22/2016		<0.01
10/3/2016	<0.01	
10/4/2016		<0.01
11/29/2016	0.0022 (J)	
12/1/2016		<0.01
1/10/2017		<0.01
2/13/2017	0.002 (J)	
2/14/2017		<0.01
4/13/2017	0.0025 (J)	
4/14/2017		<0.01
5/25/2017	0.002 (J)	<0.01
7/7/2017	0.0017 (J)	
7/10/2017		<0.01
3/26/2018	<0.01	<0.01
6/12/2018	<0.01	<0.01
10/16/2018	<0.01	<0.01

Tolerance Limit

Interwell Non-parametric

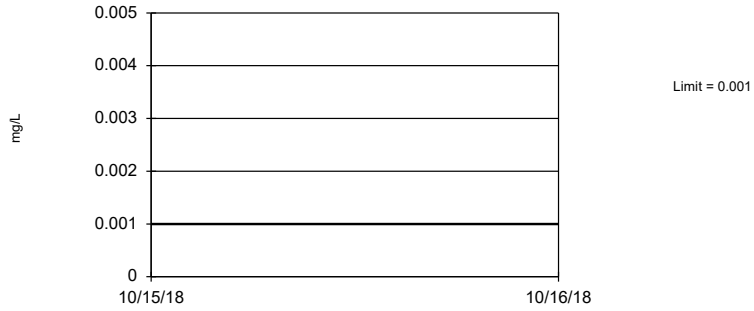
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 77.54% coverage at alpha=0.01; 84.57% coverage at alpha=0.05; 96.29% coverage at alpha=0.5. Report alpha = 0.3972.

Constituent: Selenium Analysis Run 12/19/2018 4:23 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Non-parametric



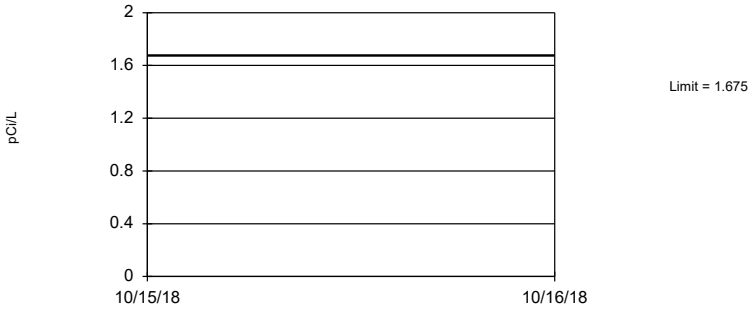
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 22 background values. 81.82% NDs. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Thallium Analysis Run 12/19/2018 4:24 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Interwell Parametric



95% coverage. Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.6425, Std. Dev.=0.4396, n=22, 22.73% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9358, critical = 0.878. Report alpha = 0.05.

Constituent: Total Radium Analysis Run 12/19/2018 4:24 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Tolerance Limit

Constituent: Selenium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.01	
8/9/2016	<0.01	
8/22/2016		<0.01
10/3/2016	<0.01	
10/4/2016		<0.01
11/29/2016	<0.01	
12/1/2016		<0.01
1/10/2017		<0.01
2/13/2017	<0.01	
2/14/2017		<0.01
4/13/2017	<0.01	
4/14/2017		<0.01
5/25/2017	<0.01	<0.01
7/7/2017	<0.01	
7/10/2017		<0.01
3/26/2018	<0.01	<0.01

Tolerance Limit

Constituent: Thallium (mg/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	<0.001	
8/9/2016	0.0001 (J)	
8/22/2016		<0.001
10/3/2016	<0.001	
10/4/2016		<0.001
11/29/2016	<0.001	
12/1/2016		<0.001
1/10/2017		<0.001
2/13/2017	<0.001	
2/14/2017		<0.001
4/13/2017	9E-05 (J)	
4/14/2017		<0.001
5/25/2017	0.0001 (J)	<0.001
7/7/2017	9E-05 (J)	
7/10/2017		<0.001
3/26/2018	<0.001	<0.001
6/12/2018	<0.001	<0.001
10/16/2018	<0.001	<0.001

Tolerance Limit

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 4:25 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWA-2 (bg)	BGWA-29 (bg)
6/6/2016	0.838	
8/9/2016	1.18	
8/22/2016		0.356
10/3/2016	0.815	
10/4/2016		0.0834
11/29/2016	0.887	
12/1/2016		0.208
1/10/2017		0.024
2/13/2017	0.869	
2/14/2017		0.105
4/13/2017	1.21	
4/14/2017		0.803
5/25/2017	1.54	0.569
7/7/2017	1.45	
7/10/2017		<0.816
3/26/2018	0.529	0.513
6/12/2018	<0.816	<0.816
10/16/2018	<0.816	<0.816

Summary of Confidence Intervals - Significant Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**BGWC-22**	**0.01617**	**0.01018**	**0.006**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	BGWC-9	0.003247	0.002117	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	BGWC-8	0.0009494	0.0004503	0.01	No	11	36.36	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-16	0.0025	0.0007	0.01	No	11	54.55	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-12	0.001148	0.0006265	0.01	No	11	45.45	No	0.01	Param.
Arsenic (mg/L)	BGWC-10	0.008218	0.005437	0.01	No	11	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-17	0.0025	0.0006	0.01	No	11	72.73	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-22	0.003102	0.001862	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	BGWC-18	0.0025	0.0005	0.01	No	11	72.73	No	0.006	NP (NDs)
Arsenic (mg/L)	BGWC-19	0.001019	0.0005414	0.01	No	11	36.36	sqrt(x)	0.01	Param.
Arsenic (mg/L)	BGWC-7	0.002874	0.001911	0.01	No	11	18.18	No	0.01	Param.
Arsenic (mg/L)	BGWC-25	0.002991	0.002172	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	BGWC-21	0.001536	0.0008071	0.01	No	11	36.36	No	0.01	Param.
Arsenic (mg/L)	BGWC-20	0.001802	0.001284	0.01	No	11	36.36	No	0.01	Param.
Arsenic (mg/L)	BGWC-24	0.008208	0.003319	0.01	No	11	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-23	0.003148	0.00167	0.01	No	11	0	No	0.01	Param.
Arsenic (mg/L)	BGWC-14	0.003869	0.001616	0.01	No	12	33.33	No	0.01	Param.
Arsenic (mg/L)	BGWC-30	0.002712	0.0009617	0.01	No	11	18.18	No	0.01	Param.
Barium (mg/L)	BGWC-9	0.03423	0.02733	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-8	0.03274	0.02381	2	No	11	0	x^2	0.01	Param.
Barium (mg/L)	BGWC-16	0.03194	0.02692	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-12	0.03323	0.02773	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-10	0.06991	0.05226	2	No	11	0	sqrt(x)	0.01	Param.
Barium (mg/L)	BGWC-17	0.0193	0.01557	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-22	0.09483	0.08784	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-18	0.038	0.03035	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-19	0.04099	0.03337	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-7	0.04269	0.03768	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-25	0.03207	0.02149	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-21	0.04987	0.04262	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-20	0.03469	0.02913	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-24	0.1292	0.07694	2	No	11	0	No	0.01	Param.
Barium (mg/L)	BGWC-23	0.09436	0.08195	2	No	11	0	ln(x)	0.01	Param.
Barium (mg/L)	BGWC-14	0.0835	0.07065	2	No	12	0	No	0.01	Param.
Barium (mg/L)	BGWC-30	0.208	0.1249	2	No	11	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-9	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-8	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-16	0.0013	0.0011	0.005	No	11	0	No	0.006	NP (normality)
Cadmium (mg/L)	BGWC-12	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-10	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-17	0.0001465	0.00009406	0.005	No	11	27.27	x^(1/3)	0.01	Param.
Cadmium (mg/L)	BGWC-22	0.0005	0.0002	0.005	No	11	90.91	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-18	0.0005772	0.000185	0.005	No	11	18.18	No	0.01	Param.
Cadmium (mg/L)	BGWC-19	0.0005	0.0001	0.005	No	11	81.82	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-7	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-25	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-21	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-20	0.0005	0.00008	0.005	No	11	90.91	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-24	0.00478	0.001387	0.005	No	11	0	No	0.01	Param.
Cadmium (mg/L)	BGWC-23	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	BGWC-14	0.0005	0.0005	0.005	No	12	100	No	0.01	NP (NDs)

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cadmium (mg/L)	BGWC-30	0.0004318	0.0001904	0.005	No	11	18.18	No	0.01	Param.
Cobalt (mg/L)	BGWC-9	0.0025	0.0003	0.006	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-8	0.0025	0.00013	0.006	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-16	0.00517	0.003757	0.006	No	11	9.091	No	0.01	Param.
Cobalt (mg/L)	BGWC-12	0.0025	0.0003	0.006	No	11	81.82	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-10	0.0025	0.0025	0.006	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-17	0.0025	0.0025	0.006	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	**BGWC-22**	**0.01617**	**0.01018**	**0.006**	**Yes**	**11**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	BGWC-18	0.0025	0.0005	0.006	No	11	63.64	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-19	0.0025	0.0025	0.006	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-7	0.0025	0.0005	0.006	No	11	36.36	No	0.006	NP (normality)
Cobalt (mg/L)	BGWC-25	0.0025	0.0006	0.006	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-21	0.0025	0.0004	0.006	No	11	72.73	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-20	0.0025	0.0008	0.006	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-24	0.00356	0.002185	0.006	No	11	9.091	No	0.01	Param.
Cobalt (mg/L)	BGWC-23	0.0025	0.0015	0.006	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	BGWC-14	0.0025	0.0003	0.006	No	12	83.33	No	0.01	NP (NDs)
Cobalt (mg/L)	BGWC-30	0.0009442	0.0006127	0.006	No	11	27.27	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-9	0.3468	0.1285	4	No	12	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-8	0.0631	0.0222	4	No	12	33.33	No	0.01	Param.
Fluoride (mg/L)	BGWC-16	0.2894	0.0737	4	No	12	25	No	0.01	Param.
Fluoride (mg/L)	BGWC-12	0.1628	0.02617	4	No	12	33.33	No	0.01	Param.
Fluoride (mg/L)	BGWC-10	0.1937	0.0498	4	No	12	16.67	No	0.01	Param.
Fluoride (mg/L)	BGWC-17	0.3558	0.1326	4	No	12	8.333	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-22	0.5021	0.2445	4	No	12	0	No	0.01	Param.
Fluoride (mg/L)	BGWC-18	0.2474	0.0773	4	No	12	8.333	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-19	0.1989	0.05487	4	No	12	16.67	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BGWC-7	0.2057	0.1054	4	No	12	8.333	No	0.01	Param.
Fluoride (mg/L)	BGWC-25	0.1204	0.05297	4	No	12	25	No	0.01	Param.
Fluoride (mg/L)	BGWC-21	0.08266	0.03151	4	No	12	33.33	No	0.01	Param.
Fluoride (mg/L)	BGWC-20	0.199	0.01659	4	No	12	25	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BGWC-24	2.145	0.2133	4	No	12	8.333	No	0.01	Param.
Fluoride (mg/L)	BGWC-23	0.1972	0.03382	4	No	12	16.67	ln(x)	0.01	Param.
Fluoride (mg/L)	BGWC-14	0.3003	0.1113	4	No	12	16.67	No	0.01	Param.
Fluoride (mg/L)	BGWC-30	0.4473	0.106	4	No	12	0	No	0.01	Param.
Lithium (mg/L)	BGWC-9	0.0125	0.0012	0.04	No	11	63.64	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-8	0.0125	0.001	0.04	No	11	90.91	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-16	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-12	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-10	0.0125	0.0011	0.04	No	11	45.45	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-17	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-22	0.024	0.0114	0.04	No	11	0	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-18	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-19	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-7	0.01041	0.008266	0.04	No	11	9.091	No	0.01	Param.
Lithium (mg/L)	BGWC-25	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-21	0.0125	0.0125	0.04	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	BGWC-20	0.02376	0.01686	0.04	No	11	0	No	0.01	Param.
Lithium (mg/L)	BGWC-24	0.0075	0.0053	0.04	No	11	9.091	No	0.006	NP (normality)
Lithium (mg/L)	BGWC-23	0.01333	0.008854	0.04	No	11	0	No	0.01	Param.

Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lithium (mg/L)	BGWC-14	0.0125	0.0125	0.04	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BGWC-30	0.01933	0.01128	0.04	No	11	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-9	0.003567	0.002706	0.1	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-8	0.00413	0.001461	0.1	No	11	18.18	No	0.01	Param.
Molybdenum (mg/L)	BGWC-16	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-12	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-10	0.0049	0.0032	0.1	No	11	0	No	0.006	NP (normality)
Molybdenum (mg/L)	BGWC-17	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-22	0.07188	0.06061	0.1	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-18	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-19	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	BGWC-7	0.01233	0.008457	0.1	No	11	0	x^2	0.01	Param.
Molybdenum (mg/L)	BGWC-25	0.00437	0.001916	0.1	No	11	36.36	No	0.01	Param.
Molybdenum (mg/L)	BGWC-21	0.002394	0.001375	0.1	No	11	45.45	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	BGWC-20	0.01467	0.01206	0.1	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-24	0.004347	0.001697	0.1	No	11	18.18	No	0.01	Param.
Molybdenum (mg/L)	BGWC-23	0.01331	0.01233	0.1	No	11	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-14	0.01084	0.006576	0.1	No	12	0	No	0.01	Param.
Molybdenum (mg/L)	BGWC-30	0.01995	0.01311	0.1	No	11	0	No	0.01	Param.
Thallium (mg/L)	BGWC-9	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-8	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-16	0.0003	0.00019	0.002	No	11	0	No	0.006	NP (normality)
Thallium (mg/L)	BGWC-12	0.0005	0.00008	0.002	No	11	72.73	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-10	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-17	0.0005	0.00008	0.002	No	11	54.55	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-22	0.0006774	0.0005008	0.002	No	11	0	No	0.01	Param.
Thallium (mg/L)	BGWC-18	0.0005	0.00006	0.002	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-19	0.0005	0.00006	0.002	No	11	54.55	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-7	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-25	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-21	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-20	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-24	0.0004447	0.0002471	0.002	No	11	18.18	No	0.01	Param.
Thallium (mg/L)	BGWC-23	0.0005	0.0001	0.002	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	BGWC-14	0.0005	0.00017	0.002	No	12	91.67	No	0.01	NP (NDs)
Thallium (mg/L)	BGWC-30	0.0007759	0.0005477	0.002	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-9	1.12	0.4308	5	No	11	27.27	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-8	0.6219	0.2292	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-16	1.166	0.3372	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-12	0.9391	0.1889	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-10	1.475	0.6821	5	No	11	18.18	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-17	0.7578	0.3477	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-22	2.37	1.594	5	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-18	0.7694	0.3223	5	No	11	27.27	sqrt(x)	0.01	Param.
Total Radium (pCi/L)	BGWC-19	1.28	0.3425	5	No	11	27.27	No	0.01	Param.
Total Radium (pCi/L)	BGWC-7	1.874	1.019	5	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-25	1.048	0.3579	5	No	11	36.36	No	0.01	Param.
Total Radium (pCi/L)	BGWC-21	0.8929	0.4441	5	No	11	27.27	No	0.01	Param.
Total Radium (pCi/L)	BGWC-20	1.705	1	5	No	11	27.27	No	0.01	Param.
Total Radium (pCi/L)	BGWC-24	3.178	2.148	5	No	11	0	No	0.01	Param.

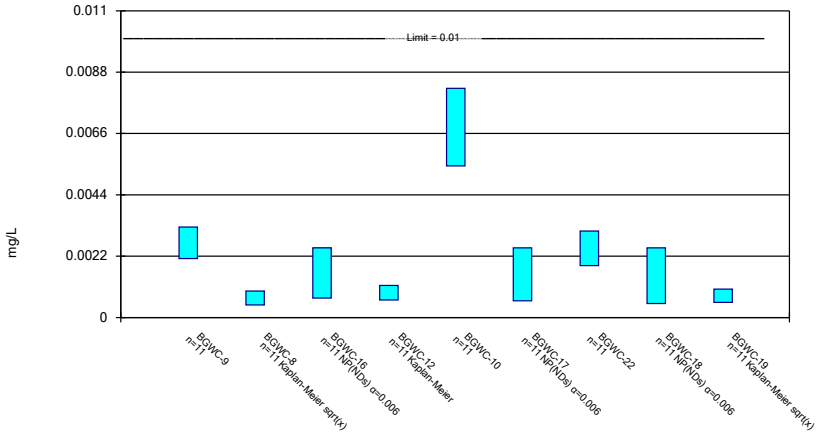
Summary of Confidence Intervals - All Results

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1 Printed 12/19/2018, 4:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Total Radium (pCi/L)	BGWC-23	1.792	0.7999	5	No	11	9.091	No	0.01	Param.
Total Radium (pCi/L)	BGWC-14	6.623	4.39	5	No	11	0	No	0.01	Param.
Total Radium (pCi/L)	BGWC-30	2.962	1.246	5	No	10	20	No	0.01	Param.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

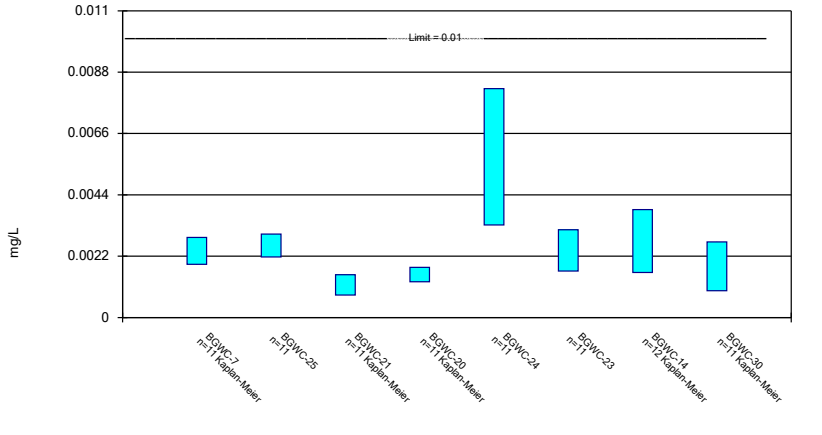


Constituent: Arsenic Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

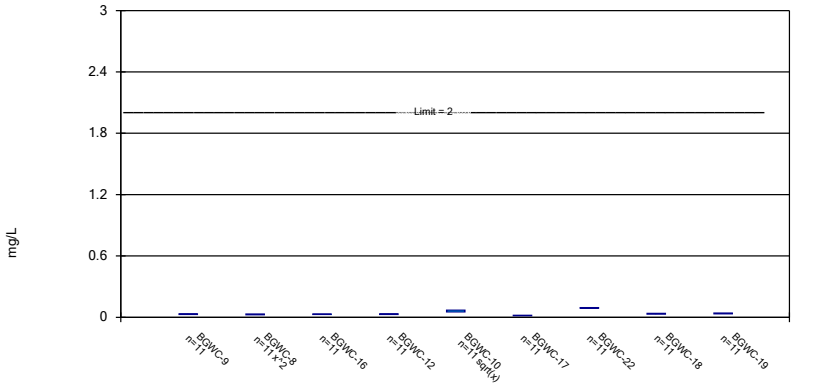


Constituent: Arsenic Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

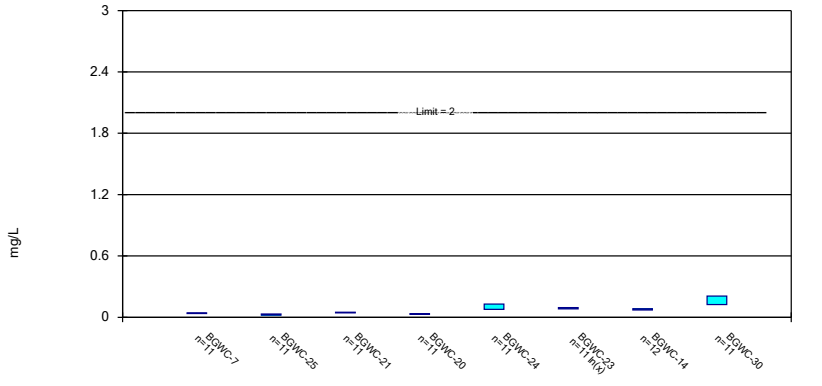


Constituent: Barium Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.0022								
6/7/2016		0.00018 (J)	<0.005	<0.005	0.0039	<0.005			
6/8/2016							0.0012 (J)	<0.005	0.00046 (J)
8/10/2016		<0.005							
8/11/2016	0.0028 (J)		<0.005			<0.005			
8/12/2016				0.0009 (J)				<0.005	0.0008 (J)
8/16/2016					0.0091				
8/18/2016							0.0022 (J)		
10/4/2016		<0.005							
10/5/2016	0.002 (J)								
10/6/2016				<0.005					
10/7/2016			<0.005		0.0074	<0.005		<0.005	<0.005
10/10/2016							0.002 (J)		
12/2/2016		<0.005							
12/5/2016	<0.005			<0.005					
12/6/2016			<0.005		0.0044 (J)	<0.005		<0.005	
12/7/2016									<0.005
12/8/2016							<0.005		
2/14/2017		<0.005							
2/15/2017	0.0033 (J)			<0.005					
2/16/2017			<0.005		0.0081	<0.005		<0.005	<0.005
2/17/2017							0.0023 (J)		
4/14/2017		0.0007 (J)							
4/17/2017	0.0028 (J)								
4/18/2017			0.0007 (J)	0.0009 (J)	0.0084				
4/19/2017						0.0012 (J)		0.0013 (J)	0.0015 (J)
4/20/2017							0.0028 (J)		
5/26/2017	0.0035 (J)	0.0008 (J)							
5/30/2017			0.0008 (J)			0.0006 (J)			
6/1/2017								0.0005 (J)	0.0008 (J)
6/2/2017				0.0015 (J)	0.008				
6/5/2017							0.0035 (J)		
7/10/2017		0.0011 (J)							
7/11/2017	0.0033 (J)								
7/12/2017					0.0063				
7/13/2017				0.0006 (J)					
7/14/2017			0.0008 (J)			<0.005		<0.005	0.0006 (J)
7/19/2017							0.0028 (J)		
3/26/2018		0.0009 (U*)							
3/27/2018	0.0021 (J)		0.0014 (J)		0.0064	0.00076 (J)		0.00066 (J)	0.00082 (J)
3/28/2018				0.0015 (J)					
3/29/2018							0.0037 (J)		
6/12/2018	0.0015 (J)	0.00065 (J)	0.00073 (J)						
6/14/2018				0.00096 (J)	0.0075	<0.005	0.0027 (J)	<0.005	
6/15/2018									0.00074 (J)
10/16/2018		0.00064 (J)							
10/17/2018	0.0035 (J)			<0.005		<0.005			
10/18/2018			<0.005		0.0056			<0.005	
10/19/2018									<0.005
10/22/2018							0.0016 (J)		
Mean	0.002682	0.001361	0.001766	0.001715	0.006827	0.002051	0.002482	0.002042	0.001429
Std. Dev.	0.000678	0.0009296	0.0008627	0.0007947	0.001669	0.0007816	0.0007441	0.0008072	0.0008864

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.003247	0.0009494	0.0025	0.001148	0.008218	0.0025	0.003102	0.0025	0.001019
Lower Lim.	0.002117	0.0004503	0.0007	0.0006265	0.005437	0.0006	0.001862	0.0005	0.0005414

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0024	0.0037	0.0015	0.0011 (J)				
6/9/2016					0.0016	0.0012 (J)		
6/10/2016							0.0049	
8/11/2016	0.0024 (J)							
8/12/2016				0.0017 (J)				
8/15/2016		0.003 (J)						
8/17/2016							0.0042 (J)	
8/18/2016			<0.005		0.0054	0.003 (J)		
10/6/2016	<0.005							
10/7/2016							<0.005	
10/10/2016		0.0026 (J)	<0.005	<0.005	0.0079	0.0021 (J)		
12/6/2016	<0.005							
12/7/2016				<0.005	0.0121	0.0023 (J)		
12/8/2016		<0.005	<0.005				<0.005	
1/23/2017								<0.005
2/7/2017								<0.005
2/15/2017	0.003 (J)							
2/17/2017			<0.005	<0.005				
2/20/2017		0.0029 (J)			0.0063	0.0025 (J)		
2/21/2017							<0.005	
3/27/2017								0.0019 (J)
4/17/2017								0.0017 (J)
4/18/2017	0.0029 (J)							
4/19/2017			0.002 (J)	0.002 (J)	0.0051	0.0032 (J)		
4/20/2017		0.0024 (J)						
4/21/2017							0.0039 (J)	
5/22/2017								0.0034 (J)
6/1/2017		0.0025 (J)	0.0011 (J)	0.0017 (J)				
6/2/2017	0.0031 (J)							
6/5/2017					0.0072	0.0043 (J)		0.0039 (J)
6/6/2017							0.001 (J)	
6/15/2017							0.0024 (J)	
7/11/2017								0.0016 (J)
7/14/2017	0.0017 (J)							
7/17/2017		0.0021 (J)			0.0031 (J)	0.0017 (J)		
7/18/2017			0.0015 (J)	0.0018 (J)				
7/19/2017							0.0031 (J)	
8/23/2017								0.001 (J)
3/26/2018								0.0015 (U*)
3/27/2018	0.0028 (J)							
3/28/2018		0.0019 (J)	0.0012 (J)	0.0018 (J)				
3/29/2018					0.0075 (J)	0.0028 (J)	0.0017 (J)	
6/13/2018	0.0023 (J)			0.0015 (J)	0.0045 (J)	0.0019 (J)		
6/14/2018		0.0022 (J)	0.00087 (J)					
6/15/2018							0.00074 (J)	0.00089 (J)
10/18/2018	0.0015 (J)							
10/19/2018			0.00059 (J)				<0.005	
10/22/2018		0.0026 (J)		<0.005	0.0027 (J)	0.0015 (J)		0.00064 (J)
Mean	0.002464	0.002582	0.001705	0.001964	0.005764	0.002409	0.002662	0.001957
Std. Dev.	0.0005045	0.0004916	0.0007253	0.0004802	0.002934	0.0008871	0.00123	0.001032
Upper Lim.	0.002874	0.002991	0.001536	0.001802	0.008208	0.003148	0.003869	0.002712
Lower Lim.	0.001911	0.002172	0.0008071	0.001284	0.003319	0.00167	0.001616	0.0009617

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.034								
6/7/2016		0.0051	0.027	0.027	0.091	0.017			
6/8/2016							0.092	0.039	0.036
8/10/2016		0.0264							
8/11/2016	0.0305		0.0292			0.0152			
8/12/2016				0.026				0.031	0.0412
8/16/2016					0.0667				
8/18/2016							0.0953		
10/4/2016		0.0316							
10/5/2016	0.0289								
10/6/2016				0.0308					
10/7/2016			0.0295		0.0631	0.0225		0.0427	0.0427
10/10/2016							0.0954		
12/2/2016		0.026							
12/5/2016	0.0269			0.0258					
12/6/2016			0.0367		0.0659	0.0171		0.0398	
12/7/2016									0.0338
12/8/2016							0.0991		
2/14/2017		0.0299							
2/15/2017	0.0299			0.029					
2/16/2017			0.0315		0.0621	0.0187		0.0309	0.0407
2/17/2017							0.0927		
4/14/2017		0.0275							
4/17/2017	0.0318								
4/18/2017			0.0272	0.0294	0.0545				
4/19/2017						0.0183		0.0325	0.042
4/20/2017							0.086		
5/26/2017	0.0341	0.0328							
5/30/2017			0.0316			0.0179			
6/1/2017								0.0331	0.0341
6/2/2017				0.0354	0.0555				
6/5/2017							0.0875		
7/10/2017		0.0305							
7/11/2017	0.0355								
7/12/2017					0.0572				
7/13/2017				0.0329					
7/14/2017			0.029			0.0191		0.0349	0.0405
7/19/2017							0.0877		
3/26/2018		0.029							
3/27/2018	0.026		0.027		0.051	0.015		0.027	0.029
3/28/2018				0.034					
3/29/2018							0.088		
6/12/2018	0.024	0.031	0.029						
6/14/2018				0.032	0.053	0.016	0.093	0.032	
6/15/2018									0.032
10/16/2018		0.034							
10/17/2018	0.037			0.033		0.015			
10/18/2018			0.026		0.053			0.033	
10/19/2018									0.037
10/22/2018							0.088		
Mean	0.03078	0.02762	0.02943	0.03048	0.06118	0.01744	0.09134	0.03417	0.03718
Std. Dev.	0.004143	0.007883	0.003014	0.003296	0.0113	0.002241	0.004198	0.004588	0.004576

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.03423	0.03274	0.03194	0.03323	0.06991	0.0193	0.09483	0.038	0.04099
Lower Lim.	0.02733	0.02381	0.02692	0.02773	0.05226	0.01557	0.08784	0.03035	0.03337

Confidence Interval

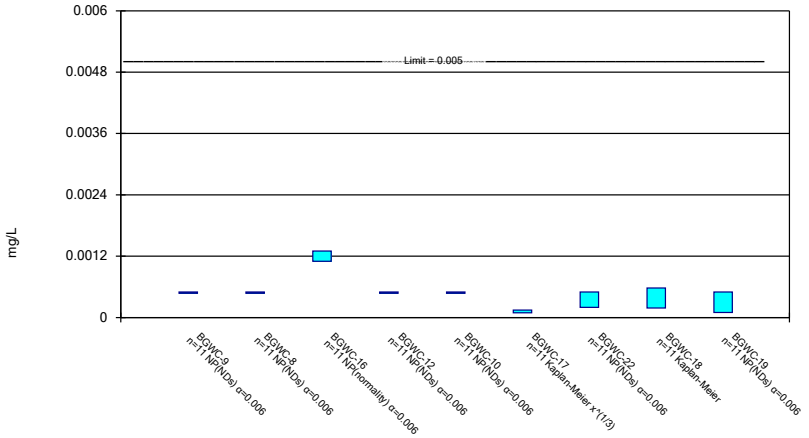
Constituent: Barium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.048	0.038	0.054	0.036				
6/9/2016					0.14	0.11		
6/10/2016							0.08	
8/11/2016	0.0428							
8/12/2016				0.0283				
8/15/2016		0.0321						
8/17/2016							0.0801	
8/18/2016			0.0479		0.113	0.0893		
10/6/2016	0.0404							
10/7/2016							0.0764	
10/10/2016		0.0283	0.0433	0.0288	0.0888	0.0839		
12/6/2016	0.0385							
12/7/2016				0.0279	0.0289	0.0912		
12/8/2016		0.0294	0.0474				0.0723	
1/23/2017								0.237
2/7/2017								0.191
2/15/2017	0.039							
2/17/2017			0.0483	0.0316				
2/20/2017		0.0275			0.0999	0.0813		
2/21/2017							0.0789	
3/27/2017								0.197
4/17/2017								0.192
4/18/2017	0.0392							
4/19/2017			0.0486	0.0367	0.114	0.087		
4/20/2017		0.0279						
4/21/2017							0.0871	
5/22/2017								0.197
6/1/2017		0.0313	0.0468	0.0361				
6/2/2017	0.0407							
6/5/2017					0.135	0.084		0.201
6/6/2017							0.0789	
6/15/2017							0.0822	
7/11/2017								0.179
7/14/2017	0.0394							
7/17/2017		0.0251			0.134	0.0809		
7/18/2017			0.0494	0.0346				
7/19/2017							0.091	
8/23/2017								0.15
3/26/2018								0.1
3/27/2018	0.039							
3/28/2018		0.018	0.043	0.03				
3/29/2018					0.08	0.085	0.067	
6/13/2018	0.038			0.031	0.1	0.091		
6/14/2018		0.019	0.042					
6/15/2018							0.066	0.087
10/18/2018	0.037							
10/19/2018			0.038				0.065	
10/22/2018		0.018		0.03	0.1	0.087		0.1
Mean	0.04018	0.02678	0.04625	0.03191	0.1031	0.08824	0.07708	0.1665
Std. Dev.	0.003006	0.006349	0.004353	0.003339	0.03134	0.008021	0.008192	0.04986
Upper Lim.	0.04269	0.03207	0.04987	0.03469	0.1292	0.09436	0.0835	0.208
Lower Lim.	0.03768	0.02149	0.04262	0.02913	0.07694	0.08195	0.07065	0.1249

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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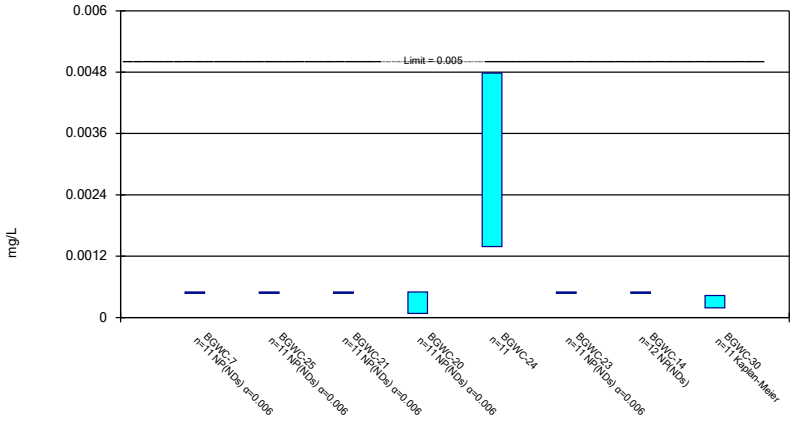
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



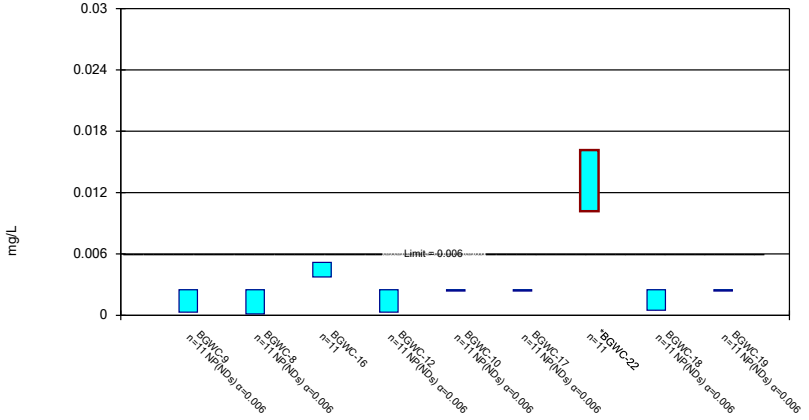
Constituent: Cadmium Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



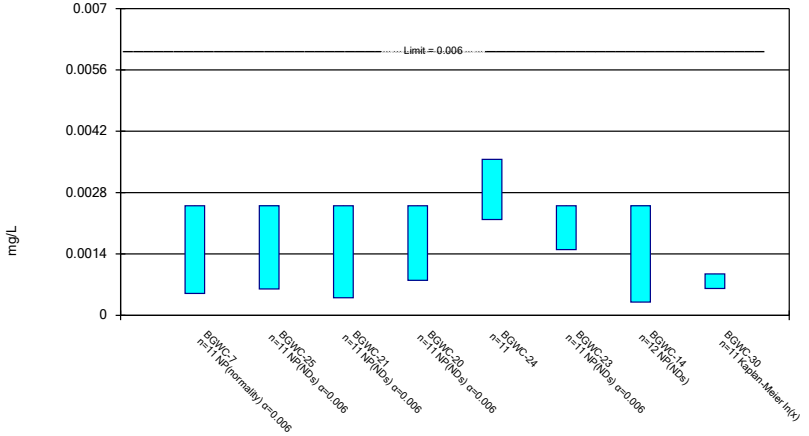
Constituent: Cobalt Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cobalt Analysis Run 12/19/2018 4:37 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.001								
6/7/2016		<0.001	0.0011 (J)	<0.001	<0.001	<0.001			
6/8/2016							<0.001	0.00063 (J)	<0.001
8/10/2016		<0.001							
8/11/2016	<0.001		0.0011			0.0001 (J)			
8/12/2016				<0.001				0.0004 (J)	<0.001
8/16/2016					<0.001				
8/18/2016							<0.001		
10/4/2016		<0.001							
10/5/2016	<0.001								
10/6/2016				<0.001					
10/7/2016			0.0012		<0.001	0.0002 (J)		0.0008 (J)	0.0001 (J)
10/10/2016							<0.001		
12/2/2016		<0.001							
12/5/2016	<0.001			<0.001					
12/6/2016			0.0012		<0.001	0.0001 (J)		0.0006 (J)	
12/7/2016									<0.001
12/8/2016							0.0002 (J)		
2/14/2017		<0.001							
2/15/2017	<0.001			<0.001					
2/16/2017			0.0015		<0.001	0.0001 (J)		0.0002 (J)	<0.001
2/17/2017							<0.001		
4/14/2017		<0.001							
4/17/2017	<0.001								
4/18/2017			0.0012	<0.001	<0.001				
4/19/2017						0.0001 (J)		9E-05 (J)	<0.001
4/20/2017							<0.001		
5/26/2017	<0.001	<0.001							
5/30/2017			0.0011			0.0002 (J)			
6/1/2017								0.0003 (J)	0.0001 (J)
6/2/2017				<0.001	<0.001				
6/5/2017							<0.001		
7/10/2017		<0.001							
7/11/2017	<0.001								
7/12/2017					<0.001				
7/13/2017				<0.001					
7/14/2017			0.0012			0.0002 (J)		0.0002 (J)	<0.001
7/19/2017							<0.001		
3/26/2018		<0.001							
3/27/2018	<0.001		0.0013		<0.001	<0.001		<0.001	<0.001
3/28/2018				<0.001					
3/29/2018							<0.001		
6/12/2018	<0.001	<0.001	0.0011						
6/14/2018				<0.001	<0.001	0.00015 (J)	<0.001	<0.001	
6/15/2018									<0.001
10/16/2018		<0.001							
10/17/2018	<0.001			<0.001		<0.001			
10/18/2018			0.0012		<0.001			0.00032 (J)	
10/19/2018									<0.001
10/22/2018							<0.001		
Mean	0.0005	0.0005	0.0012	0.0005	0.0005	0.0002409	0.0004727	0.0004127	0.0004273
Std. Dev.	0	0	0.0001183	0	0	0.0001715	9.045E-05	0.0002153	0.0001618

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.0005	0.0005	0.0013	0.0005	0.0005	0.0001465	0.0005	0.0005772	0.0005
Lower Lim.	0.0005	0.0005	0.0011	0.0005	0.0005	9.406E-05	0.0002	0.000185	0.0001

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	<0.001	<0.001	<0.001	<0.001				
6/9/2016					0.00052 (J)	<0.001		
6/10/2016							<0.001	
8/11/2016	<0.001							
8/12/2016				<0.001				
8/15/2016		<0.001						
8/17/2016							<0.001	
8/18/2016			<0.001		0.0009 (J)	<0.001		
10/6/2016	<0.001							
10/7/2016							<0.001	
10/10/2016		<0.001	<0.001	<0.001	0.0017	<0.001		
12/6/2016	<0.001							
12/7/2016				<0.001	0.0004 (J)	<0.001		
12/8/2016		<0.001	<0.001				<0.001	
1/23/2017								0.0003 (J)
2/7/2017								0.0006 (J)
2/15/2017	<0.001							
2/17/2017			<0.001	8E-05 (J)				
2/20/2017		<0.001			0.0028	<0.001		
2/21/2017							<0.001	
3/27/2017								0.0003 (J)
4/17/2017								0.0002 (J)
4/18/2017	<0.001							
4/19/2017			<0.001	<0.001	0.0035	<0.001		
4/20/2017		<0.001						
4/21/2017							<0.001	
5/22/2017								0.0003 (J)
6/1/2017		<0.001	<0.001	<0.001				
6/2/2017	<0.001							
6/5/2017					0.0035	<0.001		0.0003 (J)
6/6/2017							<0.001	
6/15/2017							<0.001	
7/11/2017								0.0005 (J)
7/14/2017	<0.001							
7/17/2017		<0.001			0.0037	<0.001		
7/18/2017			<0.001	<0.001				
7/19/2017							<0.001	
8/23/2017								0.0004 (J)
3/26/2018								<0.001
3/27/2018	<0.001							
3/28/2018		<0.001	<0.001	<0.001				
3/29/2018					0.0063	<0.001	<0.001	
6/13/2018	<0.001			<0.001	0.0053	<0.001		
6/14/2018		<0.001	<0.001					
6/15/2018							<0.001	0.0002 (J)
10/18/2018	<0.001							
10/19/2018			<0.001				<0.001	
10/22/2018		<0.001		<0.001	0.0053	<0.001		<0.001
Mean	0.0005	0.0005	0.0005	0.0004618	0.003084	0.0005	0.0005	0.0003727
Std. Dev.	0	0	0	0.0001266	0.002036	0	0	0.0001348
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.00478	0.0005	0.0005	0.0004318
Lower Lim.	0.0005	0.0005	0.0005	8E-05	0.001387	0.0005	0.0005	0.0001904

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.005								
6/7/2016		0.00013 (J)	0.0037	<0.005	<0.005	<0.005			
6/8/2016							0.0079	0.00071 (J)	<0.005
8/10/2016		0.0003 (J)							
8/11/2016	0.0003 (J)		0.0039 (J)			<0.005			
8/12/2016				<0.005				0.0006 (J)	<0.005
8/16/2016					<0.005				
8/18/2016							0.0109		
10/4/2016		<0.005							
10/5/2016	<0.005								
10/6/2016				<0.005					
10/7/2016			0.0043 (J)		<0.005	<0.005		0.0005 (J)	<0.005
10/10/2016							0.011		
12/2/2016		<0.005							
12/5/2016	0.0006 (J)			0.0006 (J)					
12/6/2016			0.005 (J)		<0.005	<0.005		0.0009 (J)	
12/7/2016									<0.005
12/8/2016							0.013		
2/14/2017		<0.005							
2/15/2017	<0.005			<0.005					
2/16/2017			0.0054 (J)		<0.005	<0.005		<0.005	<0.005
2/17/2017							0.0122		
4/14/2017		<0.005							
4/17/2017	<0.005								
4/18/2017			0.0054 (J)	<0.005	<0.005				
4/19/2017						<0.005		<0.005	<0.005
4/20/2017							0.0116		
5/26/2017	<0.005	<0.005							
5/30/2017			0.0045 (J)			<0.005			
6/1/2017								<0.005	<0.005
6/2/2017				<0.005	<0.005				
6/5/2017							0.0112		
7/10/2017		<0.005							
7/11/2017	<0.005								
7/12/2017					<0.005				
7/13/2017				0.0003 (J)					
7/14/2017			0.0049 (J)			<0.005		<0.005	<0.005
7/19/2017							0.0131		
3/26/2018		<0.005							
3/27/2018	<0.005		<0.005		<0.005	<0.005		<0.005	<0.005
3/28/2018				<0.005					
3/29/2018							0.016		
6/12/2018	<0.005	<0.005	0.0048 (J)						
6/14/2018				<0.005	<0.005	<0.005	0.017	<0.005	
6/15/2018									<0.005
10/16/2018		<0.005							
10/17/2018	<0.005			<0.005		<0.005			
10/18/2018			0.0047 (J)		<0.005			<0.005	
10/19/2018									<0.005
10/22/2018							0.021		
Mean	0.002127	0.002085	0.004464	0.002127	0.0025	0.0025	0.01317	0.001837	0.0025
Std. Dev.	0.000832	0.0009251	0.0008477	0.000832	0	0	0.003591	0.0009243	0

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.0025	0.0025	0.00517	0.0025	0.0025	0.0025	0.01617	0.0025	0.0025
Lower Lim.	0.0003	0.00013	0.003757	0.0003	0.0025	0.0025	0.01018	0.0005	0.0025

Confidence Interval

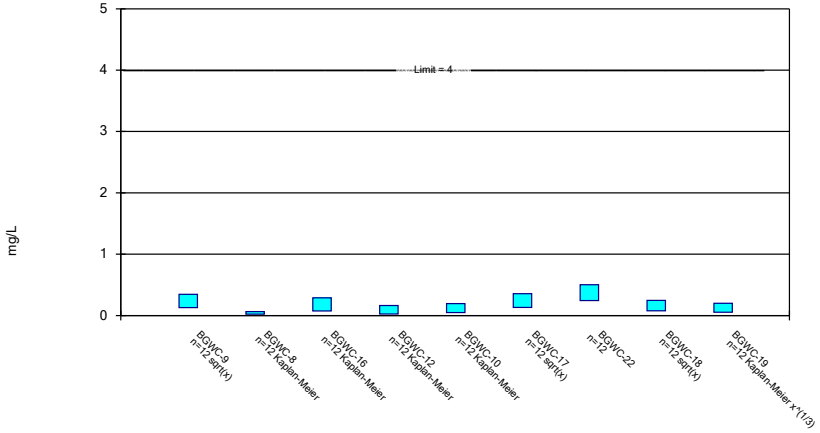
Constituent: Cobalt (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.00081 (J)	<0.005	0.00041 (J)	<0.005				
6/9/2016					0.0026	<0.005		
6/10/2016							<0.005	
8/11/2016	0.0007 (J)							
8/12/2016				<0.005				
8/15/2016		<0.005						
8/17/2016							<0.005	
8/18/2016			<0.005		0.0021 (J)	<0.005		
10/6/2016	<0.005							
10/7/2016							<0.005	
10/10/2016		<0.005	<0.005	<0.005	0.0018 (J)	<0.005		
12/6/2016	0.0009 (J)							
12/7/2016				0.0008 (J)	0.0018 (J)	0.0015 (J)		
12/8/2016		0.0006 (J)	0.0006 (J)				<0.005	
1/23/2017								0.0012 (J)
2/7/2017								0.0008 (J)
2/15/2017	<0.005							
2/17/2017			<0.005	<0.005				
2/20/2017		<0.005			0.0027 (J)	<0.005		
2/21/2017							<0.005	
3/27/2017								0.001 (J)
4/17/2017								0.0009 (J)
4/18/2017	0.0005 (J)							
4/19/2017			<0.005	<0.005	0.0032 (J)	<0.005		
4/20/2017		<0.005						
4/21/2017							<0.005	
5/22/2017								0.0008 (J)
6/1/2017		<0.005	<0.005	<0.005				
6/2/2017	0.0006 (J)							
6/5/2017					0.0034 (J)	<0.005		0.0008 (J)
6/6/2017							<0.005	
6/15/2017							0.0003 (J)	
7/11/2017								0.0008 (J)
7/14/2017	0.0006 (J)							
7/17/2017		<0.005			0.0033 (J)	<0.005		
7/18/2017			0.0004 (J)	<0.005				
7/19/2017							0.0003 (J)	
8/23/2017								0.0006 (J)
3/26/2018								<0.005
3/27/2018	<0.005							
3/28/2018		<0.005	<0.005	<0.005				
3/29/2018					<0.005	<0.005	<0.005	
6/13/2018	0.00068 (J)			<0.005	0.0039 (J)	<0.005		
6/14/2018		<0.005	<0.005					
6/15/2018							<0.005	<0.005
10/18/2018	<0.005							
10/19/2018			<0.005				<0.005	
10/22/2018		<0.005		<0.005	0.0043 (J)	<0.005		<0.005
Mean	0.001345	0.002327	0.001946	0.002345	0.002873	0.002409	0.002133	0.001309
Std. Dev.	0.0009221	0.0005729	0.0009496	0.0005126	0.0008247	0.0003015	0.0008563	0.000779
Upper Lim.	0.0025	0.0025	0.0025	0.0025	0.00356	0.0025	0.0025	0.0009442
Lower Lim.	0.0005	0.0006	0.0004	0.0008	0.002185	0.0015	0.0003	0.0006127

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



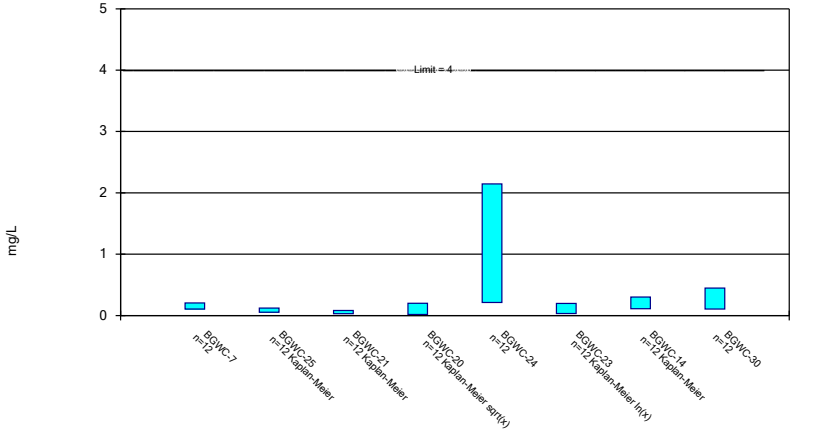
Constituent: Fluoride Analysis Run 12/19/2018 4:38 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



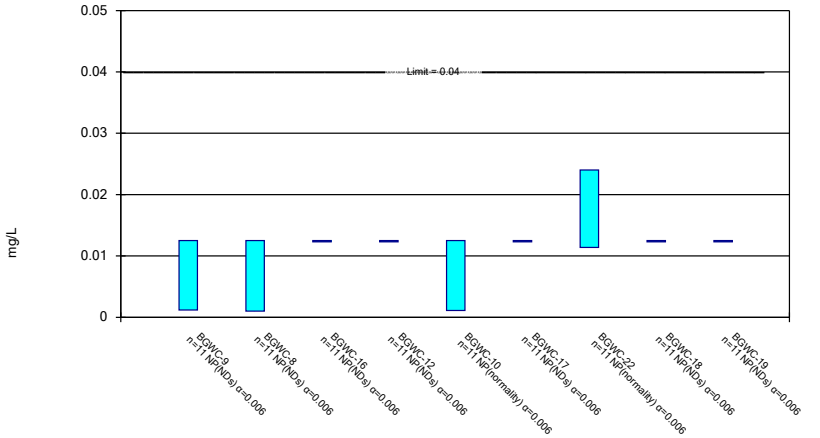
Constituent: Fluoride Analysis Run 12/19/2018 4:38 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



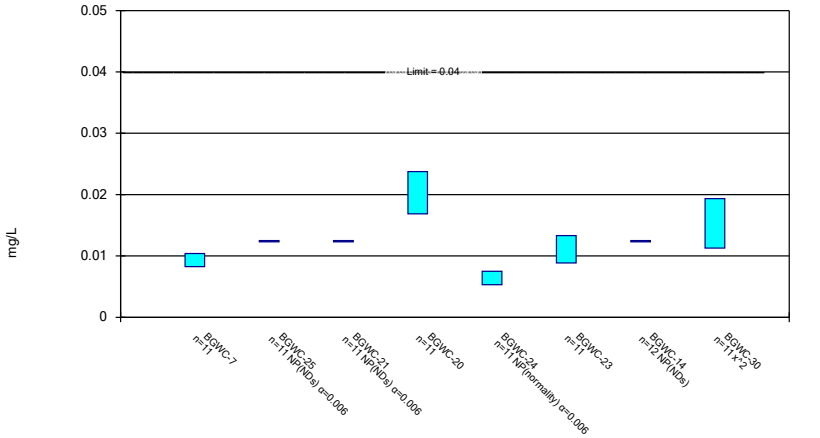
Constituent: Lithium Analysis Run 12/19/2018 4:38 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Lithium Analysis Run 12/19/2018 4:38 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.12 (J)								
6/7/2016		<0.3	<0.3	<0.3	0.09 (J)	0.15 (J)			
6/8/2016							0.43	0.1 (J)	<0.3
8/10/2016		0.07 (J)							
8/11/2016	0.27 (J)		0.12 (J)			0.3 (J)			
8/12/2016				0.08 (J)				0.39	0.2 (J)
8/16/2016					0.09 (J)				
8/18/2016							0.3 (J)		
10/4/2016		0.07 (J)							
10/5/2016	0.12 (J)								
10/6/2016				0.06 (J)					
10/7/2016			0.08 (J)		0.17 (J)	0.14 (J)		0.16 (J)	0.07 (J)
10/10/2016							0.32		
12/2/2016		0.09 (J)							
12/5/2016	0.26 (J)			0.12 (J)					
12/6/2016			0.24 (J)		0.16 (J)	0.19 (J)		0.32	
12/7/2016									0.09 (J)
12/8/2016							0.26 (J)		
2/14/2017		0.02 (J)							
2/15/2017	0.46			0.33					
2/16/2017			0.31		0.38	0.51		0.38	0.6
2/17/2017							0.39		
4/14/2017		0.02 (J)							
4/17/2017	0.14 (J)								
4/18/2017			0.02 (J)	0.006 (J)	0.12 (J)				
4/19/2017						0.18 (J)		0.08 (J)	0.09 (J)
4/20/2017							0.34		
5/26/2017	0.13 (J)	0.02 (J)							
5/30/2017			0.51			0.15 (J)			
6/1/2017								0.09 (J)	0.05 (J)
6/2/2017				0.04 (J)	0.03 (J)				
6/5/2017							0.29 (J)		
7/10/2017		0.03 (J)							
7/11/2017	0.2 (J)								
7/12/2017					0.15 (J)				
7/13/2017				0.17 (J)					
7/14/2017			0.14 (J)			0.16 (J)		0.06 (J)	0.08 (J)
7/19/2017							0.33		
10/10/2017	0.61	<0.3		0.08 (J)					
10/11/2017			0.29 (J)		0.07 (J)	0.64		0.14 (J)	0.11 (J)
10/12/2017							0.31		
3/26/2018		<0.3							
3/27/2018	0.36		<0.3		<0.3	0.33		<0.3	<0.3
3/28/2018				<0.3					
3/29/2018							0.58		
6/12/2018	0.13 (J)	0.061 (J)	0.061 (J)						
6/14/2018				<0.3	0.046 (J)	0.11 (J)	0.15 (J)	0.095 (J)	
6/15/2018									0.07 (J)
10/16/2018		<0.3							
10/17/2018	0.13 (J)			<0.3		<0.3			
10/18/2018			<0.3		<0.3			0.054 (J)	
10/19/2018									0.17 (J)

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
10/22/2018							0.78		
Mean	0.2442	0.08175	0.1851	0.1238	0.1338	0.2508	0.3733	0.1683	0.1525
Std. Dev.	0.1588	0.05521	0.1345	0.08324	0.09044	0.167	0.1642	0.1232	0.1483
Upper Lim.	0.3468	0.0631	0.2894	0.1628	0.1937	0.3558	0.5021	0.2474	0.1989
Lower Lim.	0.1285	0.0222	0.0737	0.02617	0.0498	0.1326	0.2445	0.0773	0.05487

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.19 (J)	0.14 (J)	<0.3	0.09 (J)				
6/9/2016					<0.3	0.12 (J)		
6/10/2016							0.23	
8/11/2016	0.15 (J)							
8/12/2016				0.04 (J)				
8/15/2016		0.08 (J)						
8/17/2016							0.12 (J)	
8/18/2016			0.09 (J)		0.24 (J)	0.08 (J)		
10/6/2016	0.17 (J)							
10/7/2016							0.13 (J)	
10/10/2016		0.1 (J)	0.04 (J)	0.06 (J)	0.3	0.09 (J)		
12/6/2016	0.22 (J)							
12/7/2016				0.07 (J)	0.05 (J)	0.08 (J)		
12/8/2016		0.06 (J)	0.08 (J)				0.31	
1/23/2017								0.06 (J)
2/7/2017								0.09 (J)
2/15/2017	0.18 (J)							
2/17/2017			0.08 (J)	0.06 (J)				
2/20/2017		0.16 (J)			0.65	0.09 (J)		
2/21/2017							0.35	
3/27/2017								0.09 (J)
4/17/2017								0.36
4/18/2017	0.11 (J)							
4/19/2017			0.04 (J)	0.005 (J)	0.21 (J)	0.03 (J)		
4/20/2017		0.02 (J)						
4/21/2017							0.04 (J)	
5/22/2017								0.05 (J)
6/1/2017		0.04 (J)	0.03 (J)	0.65				
6/2/2017	0.07 (J)							
6/5/2017					0.05 (J)	<0.3		0.32
6/6/2017							0.36	
7/11/2017								0.13 (J)
7/14/2017	0.23 (J)							
7/17/2017		0.07 (J)			2.5	0.09 (J)		
7/18/2017			0.08 (J)	0.36				
7/19/2017							0.18 (J)	
8/23/2017								0.17 (J)
10/10/2017								0.35
10/11/2017	0.1 (J)	0.11 (J)		<0.3	1.8	0.09 (J)		
10/12/2017			0.12 (J)				0.08 (J)	
3/26/2018								0.75
3/27/2018	<0.3							
3/28/2018		<0.3	<0.3	<0.3				
3/29/2018					2	<0.3	<0.3	
6/13/2018	0.25 (J)			0.038 (J)	3.1	0.71		
6/14/2018		<0.3	<0.3					
6/15/2018							0.41	0.51
10/18/2018	0.047 (J)							
10/19/2018			<0.3				<0.3	
10/22/2018		<0.3		<0.3	3.1	0.81		0.44
Mean	0.1556	0.1025	0.09667	0.1519	1.179	0.2075	0.2092	0.2767
Std. Dev.	0.06391	0.04827	0.04638	0.1824	1.231	0.2609	0.1209	0.2175

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
Upper Lim.	0.2057	0.1204	0.08266	0.199	2.145	0.1972	0.3003	0.4473
Lower Lim.	0.1054	0.05297	0.03151	0.01659	0.2133	0.03382	0.1113	0.106

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.025								
6/7/2016		<0.025	<0.025	<0.025	0.0065	<0.025			
6/8/2016							0.012	<0.025	<0.025
8/10/2016		<0.025							
8/11/2016	<0.025		<0.025			<0.025			
8/12/2016				<0.025				<0.025	<0.025
8/16/2016					<0.025				
8/18/2016							0.0118 (J)		
10/4/2016		<0.025							
10/5/2016	<0.025								
10/6/2016				<0.025					
10/7/2016			<0.025		<0.025	<0.025		<0.025	<0.025
10/10/2016							0.0137 (J)		
12/2/2016		<0.025							
12/5/2016	<0.025			<0.025					
12/6/2016			<0.025		<0.025	<0.025		<0.025	
12/7/2016									<0.025
12/8/2016							0.0154 (J)		
2/14/2017		<0.025							
2/15/2017	<0.025			<0.025					
2/16/2017			<0.025		<0.025	<0.025		<0.025	<0.025
2/17/2017							0.0125 (J)		
4/14/2017		<0.025							
4/17/2017	0.0013 (J)								
4/18/2017			<0.025	<0.025	0.0011 (J)				
4/19/2017						<0.025		<0.025	<0.025
4/20/2017							0.012 (J)		
5/26/2017	0.0013 (J)	<0.025							
5/30/2017			<0.025			<0.025			
6/1/2017								<0.025	<0.025
6/2/2017				<0.025	0.0011 (J)				
6/5/2017							0.0114 (J)		
7/10/2017		<0.025							
7/11/2017	<0.025								
7/12/2017					<0.025				
7/13/2017				<0.025					
7/14/2017			<0.025			<0.025		<0.025	<0.025
7/19/2017							0.0126 (J)		
3/26/2018		<0.025							
3/27/2018	0.0014 (J)		<0.025		0.0025 (J)	<0.025		<0.025	<0.025
3/28/2018				<0.025					
3/29/2018							0.021 (J)		
6/12/2018	0.0012 (J)	<0.025	<0.025						
6/14/2018				<0.025	0.0011 (J)	<0.025	0.024 (J)	<0.025	
6/15/2018									<0.025
10/16/2018		0.001 (J)							
10/17/2018	<0.025			<0.025		<0.025			
10/18/2018			<0.025		0.0016 (J)			<0.025	
10/19/2018									<0.025
10/22/2018							0.034 (J)		
Mean	0.008427	0.01145	0.0125	0.0125	0.006945	0.0125	0.0164	0.0125	0.0125
Std. Dev.	0.005651	0.003467	0	0	0.005525	0	0.007152	0	0

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.024	0.0125	0.0125
Lower Lim.	0.0012	0.001	0.0125	0.0125	0.0011	0.0125	0.0114	0.0125	0.0125

Confidence Interval

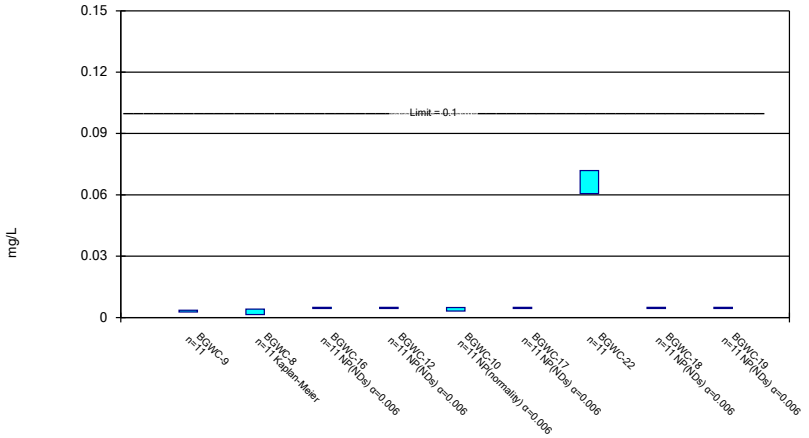
Constituent: Lithium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0079	<0.025	<0.025	0.016				
6/9/2016					0.0057	0.0074		
6/10/2016							<0.025	
8/11/2016	0.0093 (J)							
8/12/2016				0.0202 (J)				
8/15/2016		<0.025						
8/17/2016							<0.025	
8/18/2016			<0.025		0.0061 (J)	0.0078 (J)		
10/6/2016	0.0102 (J)							
10/7/2016							<0.025	
10/10/2016		<0.025	<0.025	0.0194 (J)	0.006 (J)	0.0093 (J)		
12/6/2016	0.0094 (J)							
12/7/2016				0.0265 (J)	0.0066 (J)	0.0117 (J)		
12/8/2016		<0.025	<0.025				<0.025	
1/23/2017								0.0171 (J)
2/7/2017								0.0196 (J)
2/15/2017	<0.025							
2/17/2017			<0.025	0.0253 (J)				
2/20/2017		<0.025			0.0053 (J)	0.011 (J)		
2/21/2017							<0.025	
3/27/2017								0.0192 (J)
4/17/2017								0.0169 (J)
4/18/2017	0.0086 (J)							
4/19/2017			<0.025	0.0233 (J)	0.0055 (J)	0.0105 (J)		
4/20/2017		<0.025						
4/21/2017							<0.025	
5/22/2017								0.0167 (J)
6/1/2017		<0.025	<0.025	0.023 (J)				
6/2/2017	0.0102 (J)							
6/5/2017					0.0068 (J)	0.0108 (J)		0.0177 (J)
6/6/2017							<0.025	
6/15/2017							<0.025	
7/11/2017								0.0203 (J)
7/14/2017	0.0092 (J)							
7/17/2017		<0.025			<0.025	0.0095 (J)		
7/18/2017			<0.025	0.0207 (J)				
7/19/2017							<0.025	
8/23/2017								0.0182 (J)
3/26/2018								0.0063 (J)
3/27/2018	0.0087 (J)							
3/28/2018		<0.025	<0.025	0.013 (J)				
3/29/2018					0.0053 (J)	0.014 (J)	<0.025	
6/13/2018	0.0084 (J)			0.02 (J)	0.0067 (J)	0.014 (J)		
6/14/2018		<0.025	<0.025					
6/15/2018							<0.025	0.0049 (J)
10/18/2018	0.0083 (J)							
10/19/2018			<0.025				<0.025	
10/22/2018		<0.025		0.016 (J)	0.0075 (J)	0.016 (J)		0.005 (J)
Mean	0.009336	0.0125	0.0125	0.02031	0.006727	0.01109	0.0125	0.01472
Std. Dev.	0.001284	0	0	0.004136	0.002037	0.002684	0	0.0061
Upper Lim.	0.01041	0.0125	0.0125	0.02376	0.0075	0.01333	0.0125	0.01933
Lower Lim.	0.008266	0.0125	0.0125	0.01686	0.0053	0.008854	0.0125	0.01128

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

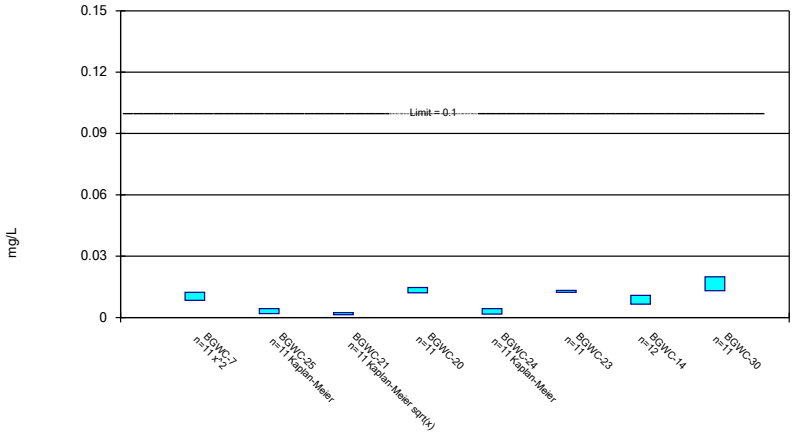


Constituent: Molybdenum Analysis Run 12/19/2018 4:39 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

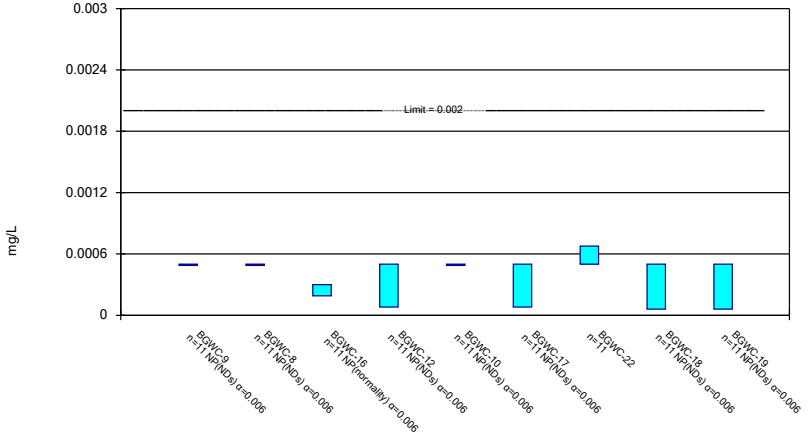


Constituent: Molybdenum Analysis Run 12/19/2018 4:39 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

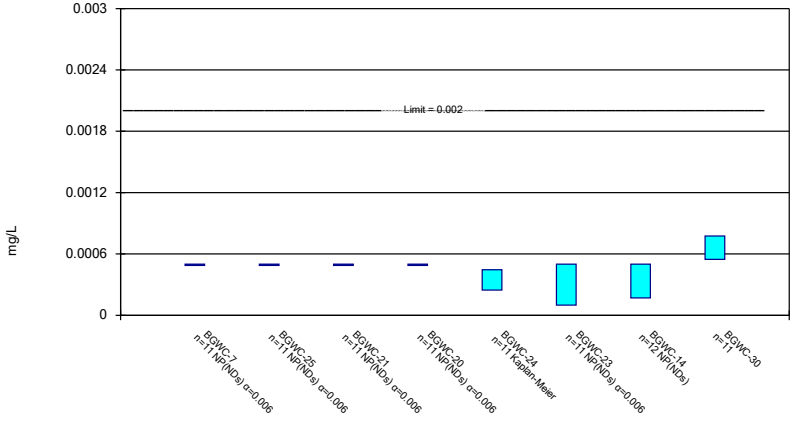


Constituent: Thallium Analysis Run 12/19/2018 4:39 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Thallium Analysis Run 12/19/2018 4:39 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.0028 (J)								
6/7/2016		0.00063 (J)	<0.01	<0.01	0.0067 (J)	<0.01			
6/8/2016							0.07	<0.01	<0.01
8/10/2016		0.0039 (J)							
8/11/2016	0.003 (J)		<0.01			<0.01			
8/12/2016				<0.01				<0.01	<0.01
8/16/2016					0.0032 (J)				
8/18/2016							0.0758		
10/4/2016		0.0052 (J)							
10/5/2016	0.0032 (J)								
10/6/2016				<0.01					
10/7/2016			<0.01		0.0032 (J)	<0.01		<0.01	<0.01
10/10/2016							0.0712		
12/2/2016		<0.01							
12/5/2016	0.0033 (J)			<0.01					
12/6/2016			<0.01		0.0049 (J)	<0.01		<0.01	
12/7/2016									<0.01
12/8/2016							0.0682		
2/14/2017		0.0044 (J)							
2/15/2017	0.0027 (J)			<0.01					
2/16/2017			<0.01		0.0039 (J)	<0.01		<0.01	<0.01
2/17/2017							0.066		
4/14/2017		0.0013 (J)							
4/17/2017	0.0025 (J)								
4/18/2017			<0.01	<0.01	0.0032 (J)				
4/19/2017						<0.01		<0.01	<0.01
4/20/2017							0.0662		
5/26/2017	0.0029 (J)	0.0024 (J)							
5/30/2017			<0.01			<0.01			
6/1/2017								<0.01	<0.01
6/2/2017				<0.01	0.0035 (J)				
6/5/2017							0.071		
7/10/2017		0.0013 (J)							
7/11/2017	0.0029 (J)								
7/12/2017					0.0037 (J)				
7/13/2017				<0.01					
7/14/2017			<0.01			<0.01		<0.01	<0.01
7/19/2017							0.0703		
3/26/2018		<0.01							
3/27/2018	0.0031 (J)		<0.01		0.0032 (J)	<0.01		<0.01	<0.01
3/28/2018				<0.01					
3/29/2018							0.056		
6/12/2018	0.0043 (J)	0.0026 (J)	<0.01						
6/14/2018				<0.01	0.0033 (J)	<0.01	0.059	<0.01	
6/15/2018									<0.01
10/16/2018		0.0041 (J)							
10/17/2018	0.0038 (J)			<0.01		<0.01			
10/18/2018			<0.01		0.0034 (J)			<0.01	
10/19/2018									<0.01
10/22/2018							0.055		
Mean	0.003136	0.003257	0.005	0.005	0.003836	0.005	0.06625	0.005	0.005
Std. Dev.	0.0005163	0.001674	0	0	0.001075	0	0.006759	0	0

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.003567	0.00413	0.005	0.005	0.0049	0.005	0.07188	0.005	0.005
Lower Lim.	0.002706	0.001461	0.005	0.005	0.0032	0.005	0.06061	0.005	0.005

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.0088 (J)	0.0064 (J)	0.0027 (J)	0.011 (J)				
6/9/2016					0.0024 (J)	0.013 (J)		
6/10/2016							0.014 (J)	
8/11/2016	0.01							
8/12/2016				0.0127				
8/15/2016		0.0039 (J)						
8/17/2016							0.0085 (J)	
8/18/2016			0.0023 (J)		0.0034 (J)	0.0136		
10/6/2016	0.0117							
10/7/2016							0.0072 (J)	
10/10/2016		0.0029 (J)	0.0025 (J)	0.0136	0.0047 (J)	0.0134		
12/6/2016	0.0102							
12/7/2016				0.0139	0.0066 (J)	0.0128		
12/8/2016		<0.01	<0.01				0.0082 (J)	
1/23/2017								0.0125
2/7/2017								0.0163
2/15/2017	0.0018 (J)							
2/17/2017			<0.01	0.0148				
2/20/2017		0.0024 (J)			0.0026 (J)	0.0122		
2/21/2017							0.0076 (J)	
3/27/2017								0.0157
4/17/2017								0.0178
4/18/2017	0.0103							
4/19/2017			0.0014 (J)	0.012	0.002 (J)	0.0124		
4/20/2017		0.0019 (J)						
4/21/2017							0.0052 (J)	
5/22/2017								0.0208
6/1/2017		0.0026 (J)	0.0012 (J)	0.0125				
6/2/2017	0.0129							
6/5/2017					0.0015 (J)	0.0115		0.0191
6/6/2017							0.0079 (J)	
6/15/2017							0.0052 (J)	
7/11/2017								0.0218
7/14/2017	0.0129							
7/17/2017		0.0024 (J)			0.0013 (J)	0.0131		
7/18/2017			0.0013 (J)	0.0155				
7/19/2017							0.0073 (J)	
8/23/2017								0.0218
3/26/2018								0.014
3/27/2018	0.01							
3/28/2018		<0.01	<0.01	0.012				
3/29/2018					0.0027 (J)	0.013	0.012	
6/13/2018	0.013			0.016	<0.01	0.013		
6/14/2018		<0.01	<0.01					
6/15/2018							0.012	0.012
10/18/2018	0.01 (J)							
10/19/2018			<0.01				0.0094 (J)	
10/22/2018		<0.01		0.013	<0.01	0.013		0.01
Mean	0.01015	0.003864	0.003309	0.01336	0.003382	0.01282	0.008708	0.01653
Std. Dev.	0.003119	0.001492	0.001687	0.001567	0.001708	0.0005879	0.002717	0.004105
Upper Lim.	0.01233	0.00437	0.002394	0.01467	0.004347	0.01331	0.01084	0.01995
Lower Lim.	0.008457	0.001916	0.001375	0.01206	0.001697	0.01233	0.006576	0.01311

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	<0.001								
6/7/2016		<0.001	0.0002 (J)	<0.001	<0.001	8.5E-05 (J)			
6/8/2016							0.00035 (J)	<0.001	8.5E-05 (J)
8/10/2016		<0.001							
8/11/2016	<0.001		0.0002 (J)			8E-05 (J)			
8/12/2016				9E-05 (J)				6E-05 (J)	8E-05 (J)
8/16/2016					<0.001				
8/18/2016							0.0005 (J)		
10/4/2016		<0.001							
10/5/2016	<0.001								
10/6/2016				<0.001					
10/7/2016			0.0002 (J)		<0.001	<0.001		<0.001	<0.001
10/10/2016							0.0006 (J)		
12/2/2016		<0.001							
12/5/2016	<0.001			<0.001					
12/6/2016			0.0003 (J)		<0.001	<0.001		<0.001	
12/7/2016									<0.001
12/8/2016							0.0005 (J)		
2/14/2017		<0.001							
2/15/2017	<0.001			<0.001					
2/16/2017			0.0003 (J)		<0.001	<0.001		<0.001	<0.001
2/17/2017							0.0006 (J)		
4/14/2017		<0.001							
4/17/2017	<0.001								
4/18/2017			0.0002 (J)	9E-05 (J)	<0.001				
4/19/2017						8E-05 (J)		<0.001	6E-05 (J)
4/20/2017							0.0006 (J)		
5/26/2017	<0.001	<0.001							
5/30/2017			0.0002 (J)			9E-05 (J)			
6/1/2017								<0.001	8E-05 (J)
6/2/2017				<0.001	<0.001				
6/5/2017							0.0006 (J)		
7/10/2017		<0.001							
7/11/2017	<0.001								
7/12/2017					<0.001				
7/13/2017				8E-05 (J)					
7/14/2017			0.0002 (J)			9E-05 (J)		<0.001	8E-05 (J)
7/19/2017							0.0007 (J)		
3/26/2018		<0.001							
3/27/2018	<0.001		0.00019 (J)		<0.001	<0.001		<0.001	<0.001
3/28/2018				<0.001					
3/29/2018							0.00063 (J)		
6/12/2018	<0.001	<0.001	0.0002 (J)						
6/14/2018				<0.001	<0.001	<0.001	0.00069 (J)	<0.001	
6/15/2018									<0.001
10/16/2018		<0.001							
10/17/2018	<0.001			<0.001		<0.001			
10/18/2018			0.0002 (J)		<0.001			<0.001	
10/19/2018									<0.001
10/22/2018							0.00071 (J)		
Mean	0.0005	0.0005	0.0002173	0.0003873	0.0005	0.0003114	0.0005891	0.00046	0.0003077
Std. Dev.	0	0	4.101E-05	0.0001931	0	0.0002167	0.000106	0.0001327	0.000221

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	0.0005	0.0005	0.0003	0.0005	0.0005	0.0005	0.0006774	0.0005	0.0005
Lower Lim.	0.0005	0.0005	0.00019	8E-05	0.0005	8E-05	0.0005008	6E-05	6E-05

Confidence Interval

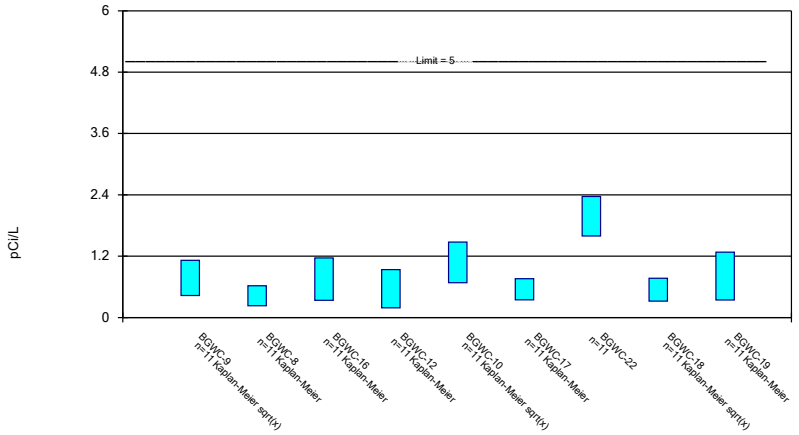
Constituent: Thallium (mg/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	<0.001	<0.001	<0.001	<0.001				
6/9/2016					0.00022 (J)	0.0001 (J)		
6/10/2016							<0.001	
8/11/2016	<0.001							
8/12/2016				<0.001				
8/15/2016		<0.001						
8/17/2016							<0.001	
8/18/2016			<0.001		<0.001	<0.001		
10/6/2016	<0.001							
10/7/2016							<0.001	
10/10/2016		<0.001	<0.001	<0.001	0.0003 (J)	<0.001		
12/6/2016	<0.001							
12/7/2016				<0.001	<0.001	<0.001		
12/8/2016		<0.001	<0.001				<0.001	
1/23/2017								0.0008 (J)
2/7/2017								0.0008 (J)
2/15/2017	<0.001							
2/17/2017			<0.001	<0.001				
2/20/2017		<0.001			0.0003 (J)	<0.001		
2/21/2017							<0.001	
3/27/2017								0.0006 (J)
4/17/2017								0.0007 (J)
4/18/2017	<0.001							
4/19/2017			<0.001	<0.001	0.0004 (J)	<0.001		
4/20/2017		<0.001						
4/21/2017							<0.001	
5/22/2017								0.0008 (J)
6/1/2017		<0.001	<0.001	<0.001				
6/2/2017	<0.001							
6/5/2017					0.0004 (J)	<0.001		0.0007 (J)
6/6/2017							<0.001	
6/15/2017							<0.001	
7/11/2017								0.0007 (J)
7/14/2017	<0.001							
7/17/2017		<0.001			0.0004 (J)	<0.001		
7/18/2017			<0.001	<0.001				
7/19/2017							<0.001	
8/23/2017								0.0007 (J)
3/26/2018								0.00058 (J)
3/27/2018	<0.001							
3/28/2018		<0.001	<0.001	<0.001				
3/29/2018					0.00048 (J)	<0.001	<0.001	
6/13/2018	<0.001			<0.001	0.00053 (J)	<0.001		
6/14/2018		<0.001	<0.001					
6/15/2018							<0.001	0.00056 (J)
10/18/2018	<0.001							
10/19/2018			<0.001				0.00017 (J)	
10/22/2018		<0.001		<0.001	0.00047 (J)	<0.001		0.00034 (J)
Mean	0.0005	0.0005	0.0005	0.0005	0.0004091	0.0004636	0.0004725	0.0006618
Std. Dev.	0	0	0	0	9.985E-05	0.0001206	9.526E-05	0.000137
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0004447	0.0005	0.0005	0.0007759
Lower Lim.	0.0005	0.0005	0.0005	0.0005	0.0002471	0.0001	0.00017	0.0005477

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 12/19/2018 4:39 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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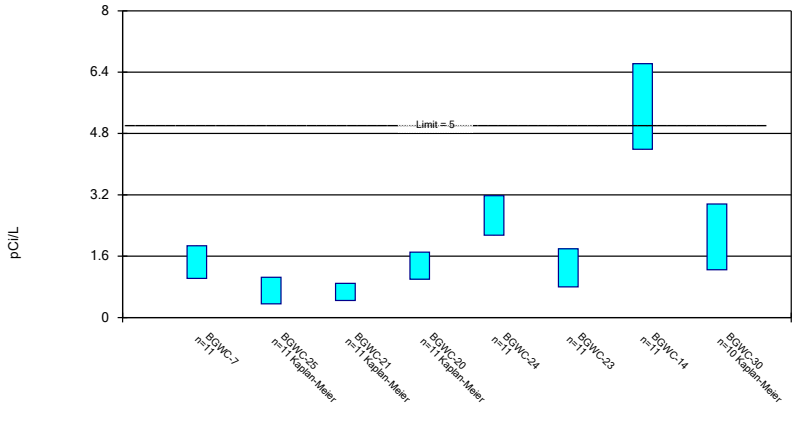
Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Total Radium Analysis Run 12/19/2018 4:39 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
6/6/2016	0.488								
6/7/2016		<1.04	<1.04	<1.04	0.616	<1.04			
6/8/2016							1.53	0.406	<1.04
8/10/2016		0.862							
8/11/2016	0.639		1.71			0.808			
8/12/2016				0.849				1.39	1.18
8/16/2016					1.08				
8/18/2016							2.47		
10/4/2016		0.48							
10/5/2016	0.945								
10/6/2016				1.57					
10/7/2016			0.485		2.82	0.874		0.451	1.97
10/10/2016							2.11		
12/2/2016		0.219							
12/5/2016	2.2			0.956					
12/6/2016			1.22		0.719	0.131		0.516	
12/7/2016									1.31
12/8/2016							2.64		
2/14/2017		0.636							
2/15/2017	0.74			0.229					
2/16/2017			0.19		0.966	0.471		0.172	0.35
2/17/2017							1.34		
4/14/2017		0.13							
4/17/2017	0.764								
4/18/2017			0.52	0.0114	1.01				
4/19/2017						0.65		0.704	0.974
4/20/2017							2.35		
5/26/2017	0.245	0.349							
5/30/2017			1.21			0.65			
6/1/2017								0.493	0.332
6/2/2017				0.375	1.13				
6/5/2017							1.6		
7/10/2017		<1.04							
7/11/2017	<1.04								
7/12/2017					1.29				
7/13/2017				<1.04					
7/14/2017			<1.04			<1.04		<1.04	1.27
7/19/2017							1.76		
3/26/2018		0.303							
3/27/2018	0.745		1.34		0.779	0.551		0.569	0.169
3/28/2018				0.36					
3/29/2018							2.43		
6/12/2018	<1.04	<1.04	<1.04						
6/14/2018				<1.04	<1.04	<1.04	2.14 (J)	<1.04	
6/15/2018									<1.04
10/16/2018		<1.04							
10/17/2018	<1.04			<1.04		<1.04			
10/18/2018			<1.04		<1.04			<1.04	
10/19/2018									<1.04
10/22/2018							1.43 (J)		
Mean	0.7569	0.4599	0.7959	0.5846	1.041	0.565	1.982	0.5692	0.8286
Std. Dev.	0.5133	0.2028	0.4824	0.4177	0.6433	0.1935	0.4653	0.301	0.5541

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-9	BGWC-8	BGWC-16	BGWC-12	BGWC-10	BGWC-17	BGWC-22	BGWC-18	BGWC-19
Upper Lim.	1.12	0.6219	1.166	0.9391	1.475	0.7578	2.37	0.7694	1.28
Lower Lim.	0.4308	0.2292	0.3372	0.1889	0.6821	0.3477	1.594	0.3223	0.3425

Confidence Interval

Constituent: Total Radium (pCi/L) Analysis Run 12/19/2018 4:40 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

	BGWC-7	BGWC-25	BGWC-21	BGWC-20	BGWC-24	BGWC-23	BGWC-14	BGWC-30
6/8/2016	0.854	<1.04	0.573	<1.04				
6/9/2016					2.13	0.704		
8/11/2016	1.24							
8/12/2016				1.74				
8/15/2016		1.2						
8/17/2016							5.18	
8/18/2016			0.44		2.67	1.88		
10/6/2016	2.43							
10/10/2016		1.03	0.933	0.944	3.46	1.48		
12/6/2016	0.958							
12/7/2016				2.29	1.65	2.61		
12/8/2016		1.47	1.02					
1/23/2017								2.71
2/7/2017								3
2/15/2017	1.18							
2/17/2017			0.193	1.35				
2/20/2017		0.547			2.68	0.884		
2/21/2017							5.1	
4/17/2017								2.73
4/18/2017	1.26							
4/19/2017			0.488	1.48	3.81	0.948		
4/20/2017		0.0595						
5/22/2017								3.15 (D)
5/26/2017							7.14	
6/1/2017		0.67	0.837	1.61				
6/2/2017	1.24							
6/5/2017					2.86	1.33		0.86
6/6/2017							4.68	
6/15/2017							5.69	
7/11/2017								1.87
7/12/2017							2.92	
7/14/2017	1.55							
7/17/2017		<1.04			2.87	1.04		
7/18/2017			<1.04					
7/19/2017				1.626				
8/10/2017							6.51	
8/23/2017								3.39
8/25/2017							7.04	
3/26/2018								1.61 (U*)
3/27/2018	2.15							
3/28/2018		0.507	0.864	0.97				
3/29/2018					2.79	1.65	6.35	
6/13/2018	1.95 (J)			<1.04	2.19 (J)	<1.04		
6/14/2018		<1.04	<1.04					
6/15/2018							6.2 (J)	<1.04
10/18/2018	1.1 (J)							
10/19/2018			<1.04				3.76 (J)	
10/22/2018		<1.04		<1.04	2.18 (J)	1.21 (J)		<1.04
Mean	1.447	0.6876	0.628	1.234	2.663	1.296	5.506	2.036
Std. Dev.	0.5126	0.3939	0.2506	0.5851	0.6178	0.5953	1.34	1.112
Upper Lim.	1.874	1.048	0.8929	1.705	3.178	1.792	6.623	2.962
Lower Lim.	1.019	0.3579	0.4441	1	2.148	0.7999	4.39	1.246

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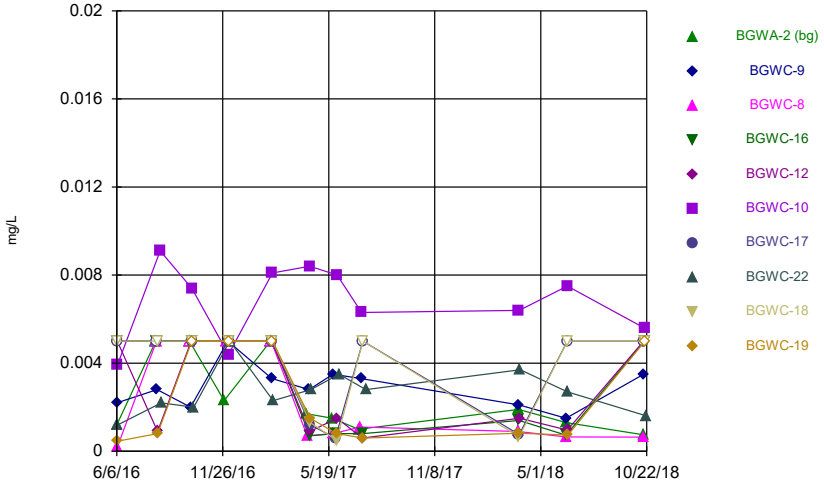
Time Series



Constituent: Arsenic Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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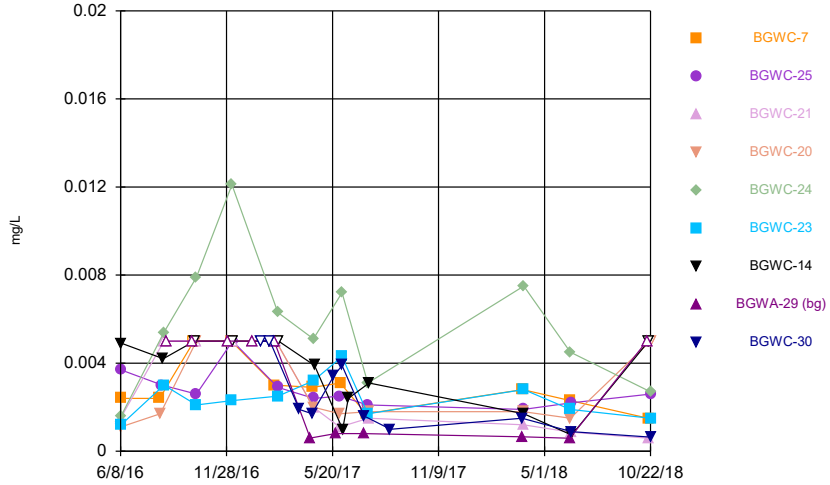
Time Series



Constituent: Arsenic Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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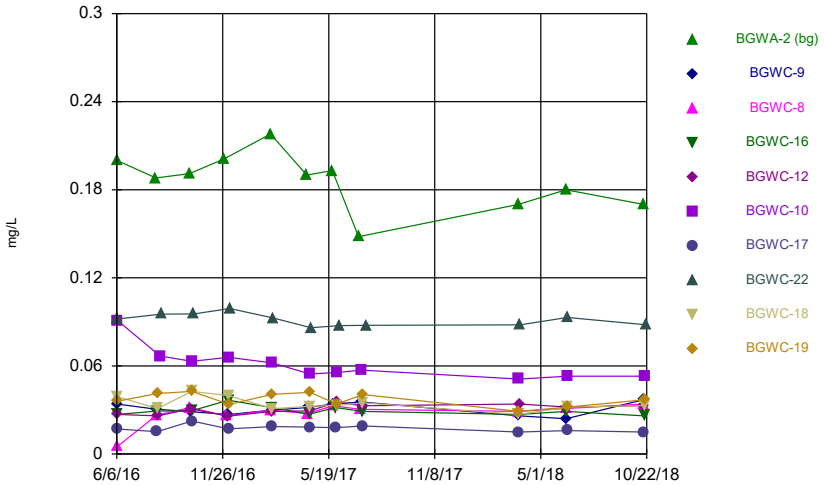
Time Series



Constituent: Barium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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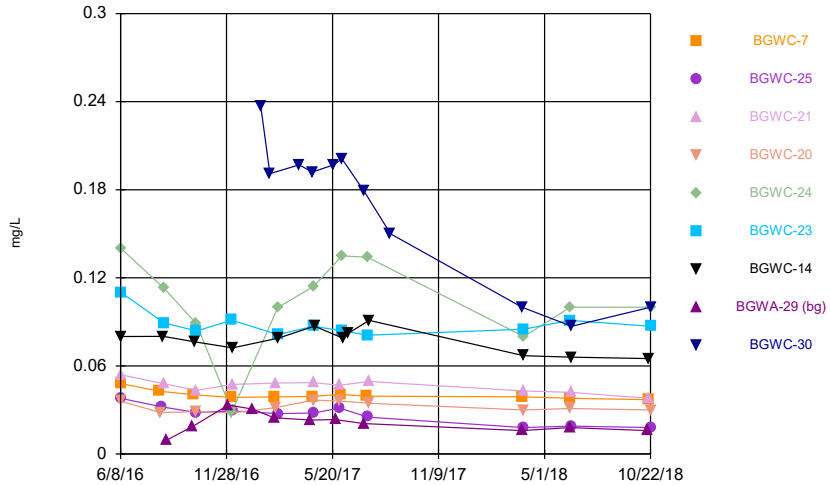
Time Series



Constituent: Barium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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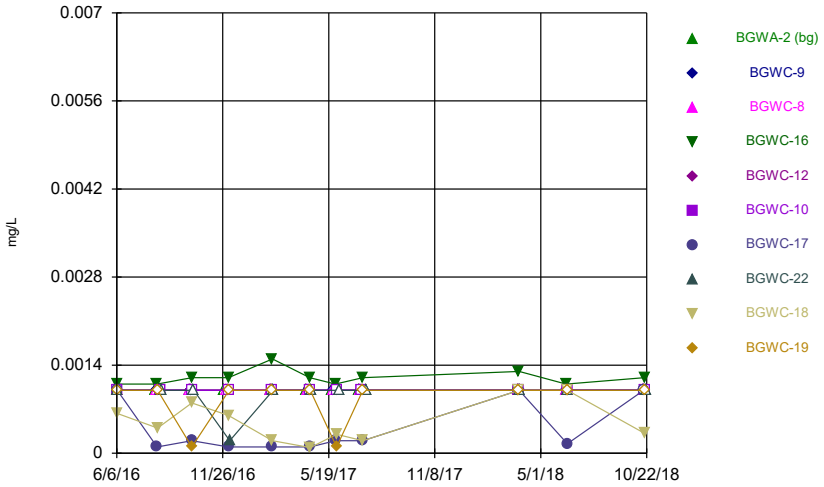
Time Series



Constituent: Cadmium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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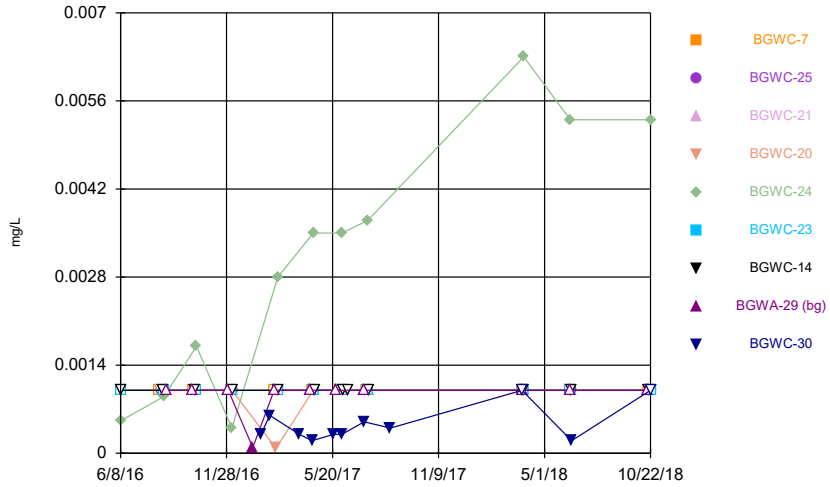
Time Series



Constituent: Cadmium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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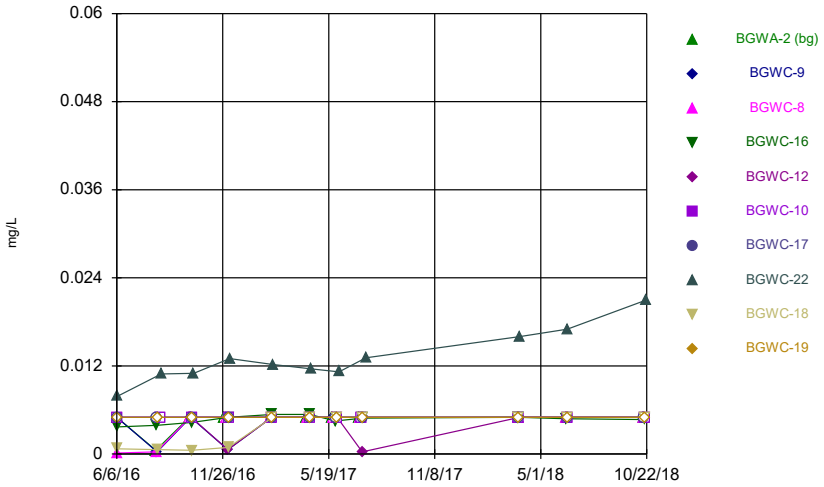
Time Series



Constituent: Cobalt Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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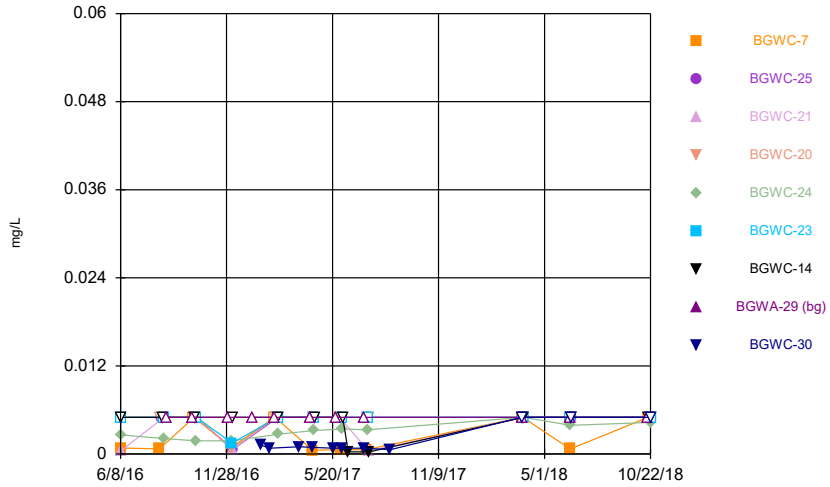
Time Series



Constituent: Cobalt Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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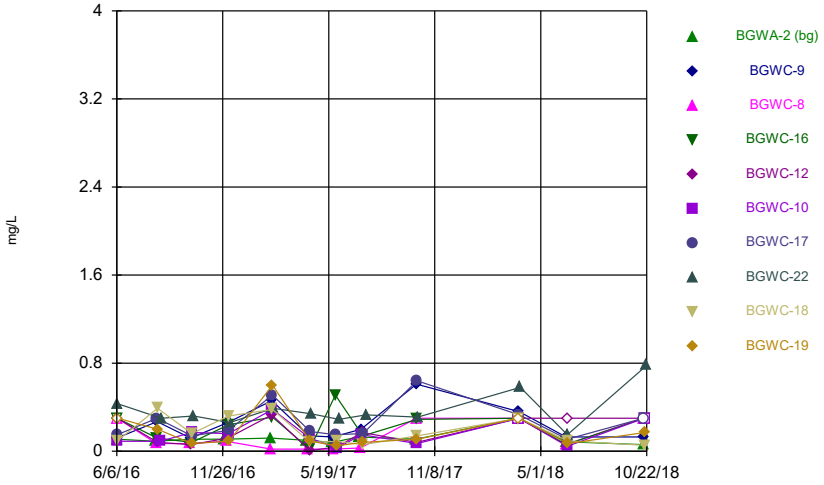
Time Series



Constituent: Fluoride Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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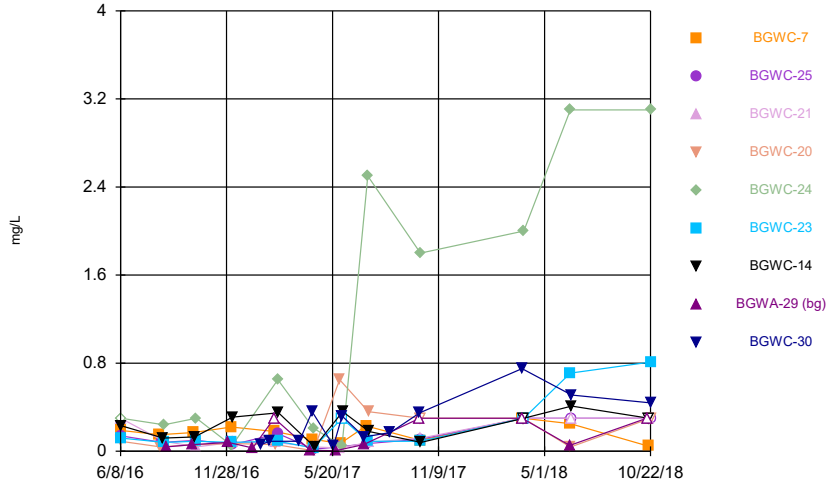
Time Series



Constituent: Fluoride Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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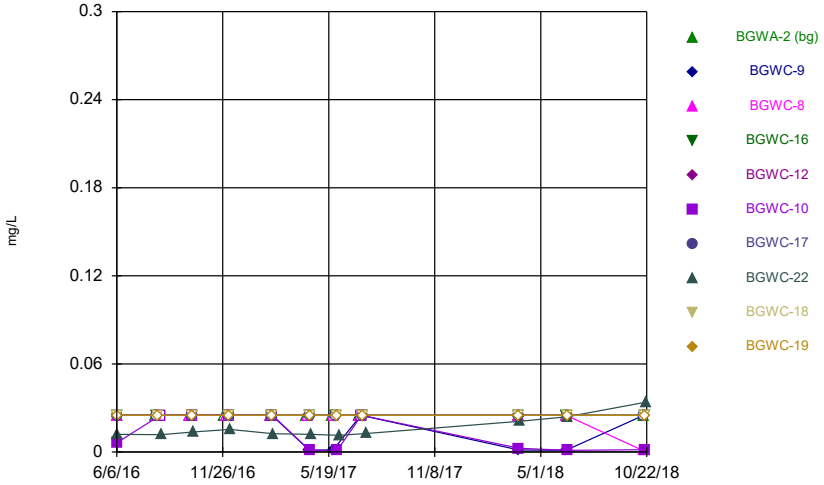
Time Series

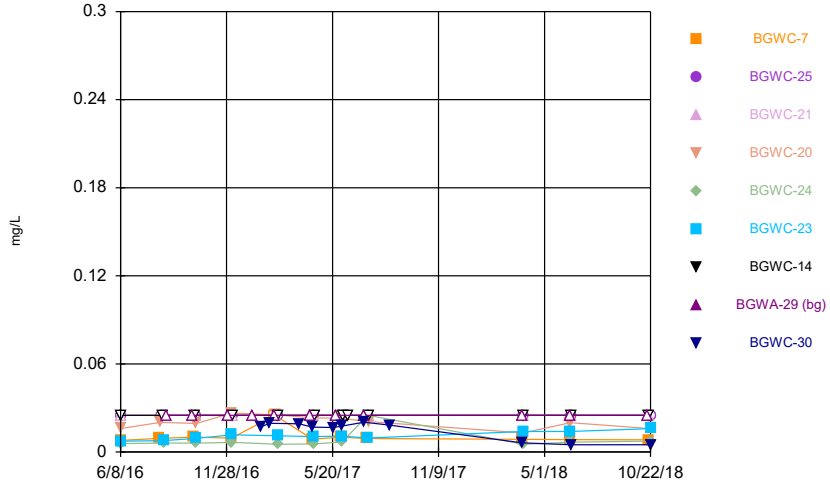


Constituent: Lithium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series

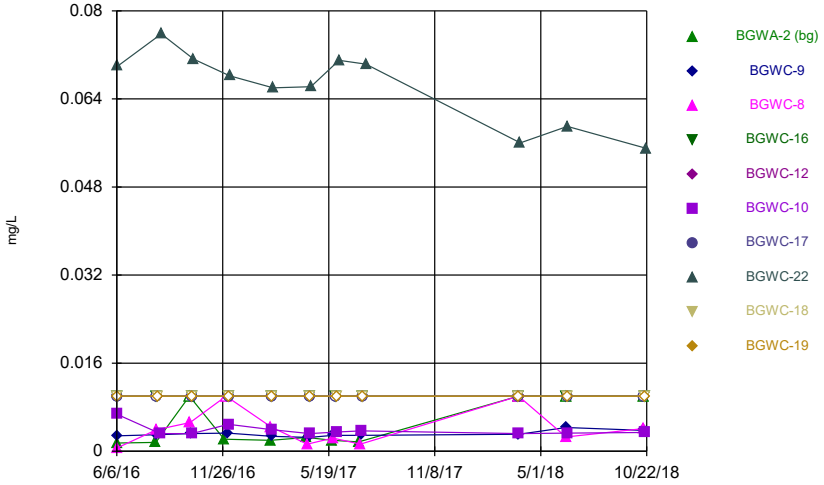


Constituent: Lithium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

Sanitas™ v.9.6.05 Software licensed to Geosyntec Consultants. Hollow symbols indicate censored values.

Time Series



Constituent: Molybdenum Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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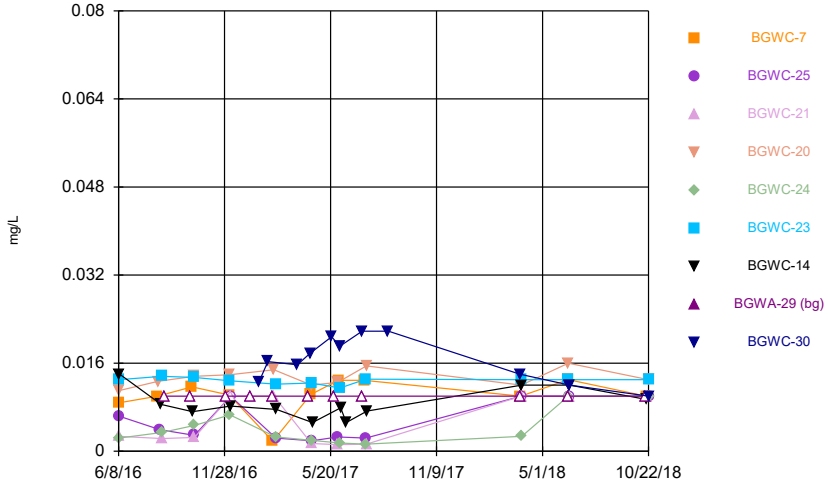
Time Series



Constituent: Molybdenum Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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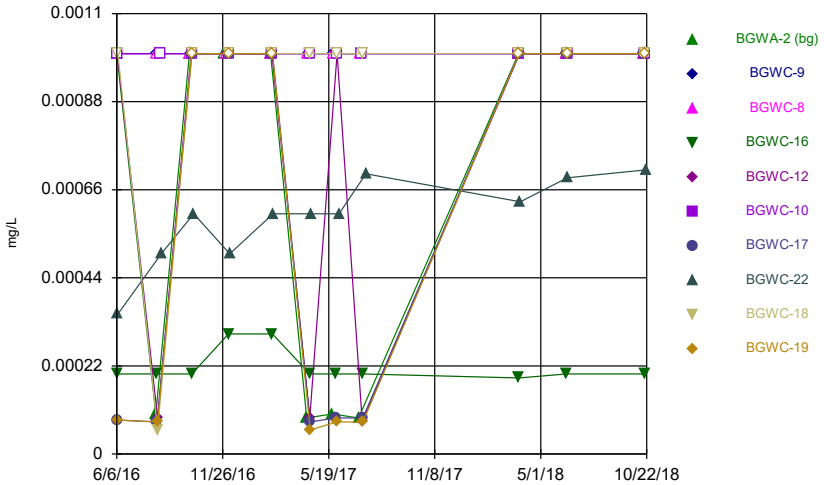
Time Series



Constituent: Thallium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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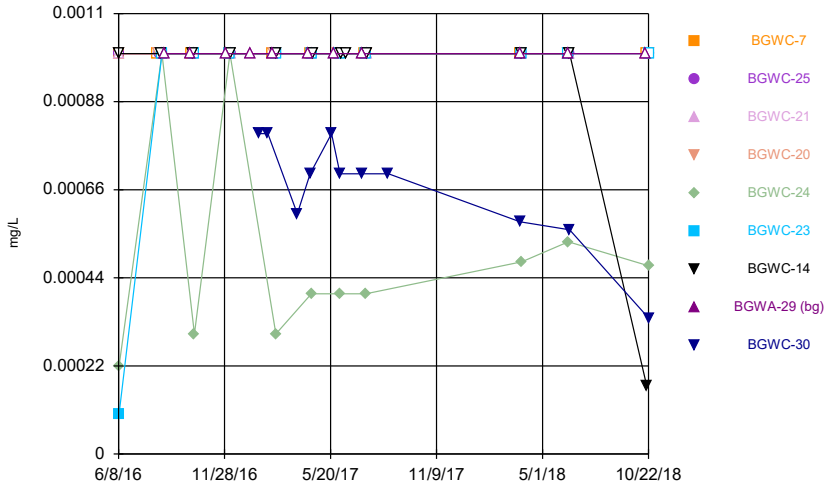
Time Series



Constituent: Thallium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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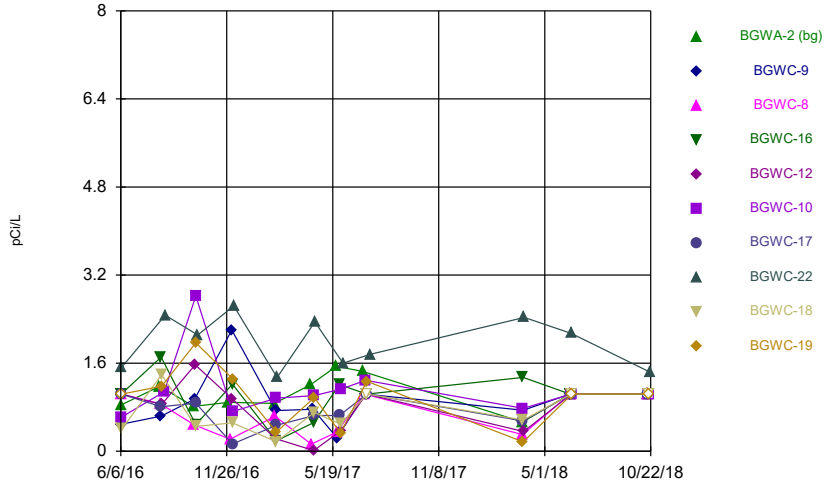
Time Series



Constituent: Total Radium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1

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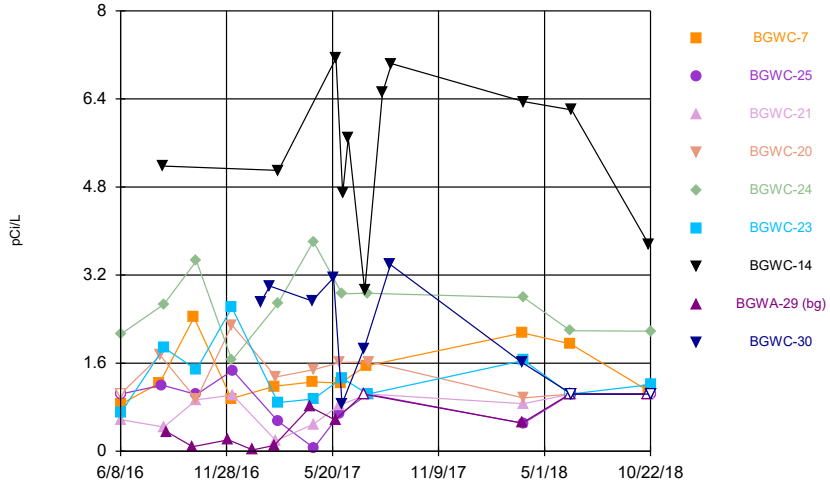
Time Series



Constituent: Total Radium Analysis Run 12/19/2018 4:44 AM

Plant Bowen Client: Georgia Power Company Data: Bowen AP-1